



# *South Australian Year Book*

1985

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**SOUTH AUSTRALIAN  
YEAR BOOK**

**1985**

The Port of Adelaide can accommodate large ships. Here is shown the P & O passenger liner *Queen Elizabeth II* of 67 140 tonnes entering the Outer Harbor on the morning of 19 February 1985.









# *South Australian Year Book*

## *No. 20 : 1985*

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and Government Statist*

AUSTRALIAN BUREAU OF STATISTICS  
SOUTH AUSTRALIAN OFFICE

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## PREFACE

The *South Australian Year Book* is a general reference work presenting an authoritative and comprehensive statistical and descriptive portrayal of South Australia. It includes studies of the historical and geographical background and of the social, physical and financial development of the State culminating in a picture of South Australia as it is today.

This volume, the twentieth issue of the Year Book, includes a special article on Snakes in South Australia and a regional study of the Adelaide Statistical Division. Some chapters or portions of chapters have been condensed to make room for the additional material but in such cases appropriate cross-references are given indicating in which earlier volumes the more complete information may be found. A list of special articles which appeared in previous issues is shown on pages 627-8.

Other official statistics of South Australia are published in different media, each chosen as the most appropriate to meet a particular need, whether this be for a compact reference guide, or for more detailed historical or up-to-date data, either on a specific subject or embracing wider fields.

A comprehensive range of statistics is published also by the Australian Statistician covering the whole of Australia (but giving some broad details about the States) and by other Deputy Commonwealth Statisticians for their respective States. The details of such publications are available at each office of the Bureau.

This Office maintains an Information Service, which, on request, supplies available statistical information and advice on which publications are appropriate, and a library in which all publications of the Australian Bureau of Statistics are available for reference. Businessmen, government officers and members of the public are invited to make use of these services.

I gratefully acknowledge the valuable assistance given by contributors of special articles, the Government Printing Division staff, and the staff of Computer Graphics Corporation Pty Ltd. My thanks are tendered to the staff of this Bureau, especially Mr I. R. Milne, B.Ec., under whose direction the Year Book was compiled by Mr G. D. Carey, B.Ec., AASA (Senior).

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August 1985

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## EXPLANATORY NOTES

In general, statistics in this volume relate to South Australia. A few tables, which are appropriately footnoted, include details for the Northern Territory.

Values are shown in Australian dollars (\$) or \$A) and cents unless another currency is specified.

Where figures have been rounded, discrepancies may occur between sums of component items and totals.

### Symbols Used

<i>n.a.</i>	not collected
<i>n.e.c.</i>	not elsewhere classified
<i>n.e.i.</i>	not elsewhere included
<i>n.e.s.</i>	not elsewhere specified
<i>n.p.</i>	not available for publication but included in totals where applicable, unless otherwise indicated
<i>n.y.a.</i>	figures not yet available
<i>p</i>	preliminary
<i>..</i>	not applicable
—	nil or less than half the final digit shown
————	break in continuity of series (where drawn across a column between two consecutive figures)

### Citation of Acts

Acts of the Commonwealth Parliament are cited in *italics e.g. Census and Statistics Act 1905.*

Acts of the South Australian Parliament are cited in roman type *e.g. Holidays Act, 1910-1980.*



## **PART 1**

# **NATURAL ENVIRONMENT**

## **1.1 DESCRIPTION**

### **Size and Location**

The State of South Australia has the Southern Ocean to the south and is flanked on the other sides by land. It lies south of the 26th parallel of south latitude and has as a western boundary the 129th meridian of east longitude. The eastern boundary, north of the River Murray, corresponds with the 141st meridian, while to the south, between the river and the sea, the boundary lies approximately three kilometres to the west of this meridian.

The State is approximately 1 201 kilometres from east to west at the northern boundary and 1 143 kilometres at the head of the Great Australian Bight; from north to south it varies from 630 kilometres near the western extremity to approximately 1 325 kilometres near the eastern boundary; its coastline, excluding islands, measures approximately 3 700 kilometres. South Australia covers a total area of 984 377 square kilometres (one-eighth of the area of the Australian continent); however, approximately one-third of this area has no significant economic use and over one-half is devoted to extensive pastoral pursuits. Approximately 99 per cent of the population live south of the 32nd parallel.

A comparison of the areas, length of coastline and standard time of the various States and Territories is shown in the following table. The areas and length of coastline were determined by the Division of National Mapping by manually digitising these features from the 1:250 000 map series of Australia. This means that only features of measurable size at this scale were considered. About 60 000 points were digitised at an approximate

spacing of 0.5 kilometres. These points were joined by chords as the basis for calculation of areas and coastline lengths by computer.

### Area, Coastline and Standard Times, Australia

State or Territory	Estimated Area (a)		Length of Coastline (a)	Standard Time	
	Total	Percentage of Total Area		Meridian Selected	Ahead of G.M.T.
	'000 km <sup>2</sup>		km		Hours
New South Wales .....	802	10.43	1 900	150°E	(b) 10.0
Victoria .....	228	2.96	1 800	150°E	(b) 10.0
Queensland .....	1 727	22.48	7 400	150°E	10.0
Western Australia .....	2 526	32.87	12 500	120°E	8.0
<b>South Australia</b> .....	<b>984</b>	<b>12.81</b>	<b>3 700</b>	<b>142°30'E</b>	<b>(b) 9.5</b>
Tasmania .....	68	0.88	3 200	150°E	(b) 10.0
Northern Territory .....	1 346	17.52	6 200	142°30'E	9.5
Australian Capital Territory .	2	0.03	35	150°E	(b) 10.0
<b>Australia</b> .....	<b>7 682</b>	<b>100.00</b>	<b>36 735</b>	<b>..</b>	<b>..</b>

(a) As determined by the Division of National Mapping.

(b) Because of 'daylight saving' an hour should be added from late October to early March.

### Standard Time

In terms of the Standard Time Act, 1898 South Australia has used 'the mean time of the meridian of longitude 142.5 degrees east of Greenwich' as standard time since 1 May 1899. This time, known in Australia as Central Standard Time, is nine hours thirty minutes ahead of Greenwich Mean Time, one hour thirty minutes ahead of Western Standard Time used in Western Australia and thirty minutes behind Eastern Standard Time used by States on the east coast of Australia.

Before 1 February 1895 the meridian of Adelaide 138° 35' east (*i.e.* 9 hours 14 minutes ahead of Greenwich) was used to determine standard time in South Australia and subsequently from 1 February 1895 to 30 April 1899 the meridian 135° (*i.e.* 9 hours ahead of Greenwich) was used.

In several years during the 1939-45 War daylight saving in summer time was introduced by the Commonwealth Government under National Security Regulations. Summer time was fixed at one hour in advance of standard time from 2 a.m. on 1 January 1942 to 2 a.m. on 29 March 1942, from 2 a.m. on 27 September 1942 to 2 a.m. on 28 March 1943 and from 2 a.m. on 3 October 1943 to 2 a.m. on 26 March 1944.

Under the Daylight Saving Act, 1971, daylight saving was introduced for the first time since the 1939-45 War at 2 a.m. on 31 October 1971 and remained in force until 2 a.m. on 27 February 1972. During this period 'South Australian summer time', one hour ahead of South Australian Standard Time, was adopted.

The Daylight Saving Act Amendment Act, 1972 provided for the observance of daylight saving in the summer of 1972-73, and in each summer since, from the last Sunday in October until the first Sunday in March.

A special article on the basis of time keeping and the determination of time standards was included on pages 4-5 of the *South Australian Year Book* 1984. An article on the determination of the time of sunrise and sunset was included on pages 6-7 of the same issue.

### Physical Features

South Australia is a land of generally low relief, the inland area being largely covered by featureless plains, or sand and gibber deserts. Approximately 50 per cent of the State is less than 150 metres above sea level and over 80 per cent is less than 300 metres. Even the dominant mountains, the Mount Lofty-Flinders Ranges system, nowhere exceed 1 200 metres and have at no point proved difficult barriers to communications.

On the other hand the pattern of communication and development has been greatly influenced by the nature of the coastline, the south-easterly trend of which is interrupted by two major indentations, Spencer Gulf and Gulf St Vincent. These two relatively shallow depressions cut into the settled areas a distance of approximately 300 and 150 kilometres respectively. The resultant natural divisions earlier tended to develop their own centres and many ports were constructed along the coast in spite of the fact that, with the exception of the area between Port Lincoln and Fowlers Bay, the nature of the coastline is not particularly accommodating to port development.

Kangaroo Island, approximately 480 kilometres in circumference and covering 4 350 square kilometres, is the predominant island off the South Australian coastline. There are, however, approximately 100 islands in all, relatively few of which are utilised.

The effect of the vast ocean area to the south is a more temperate climate than would be suggested by the latitude while the trend of the coastline exposes the coastal areas to the westerly rain-bearing air streams.

The most important mountains are the Mount Lofty-Flinders Ranges system. Kangaroo Island structurally belongs to these ranges which, together with parallel subsidiary ranges, extend north from Cape Jervis some 800 kilometres to the northern end of Lake Torrens. In the south the rounded hills of the Mount Lofty Ranges are of comparatively low altitude with Mount Lofty, the highest peak, being 727 metres. The western side of these ranges presents steep scarps to the Adelaide Plains while on the eastern side more gentle slopes merge into the Murray Basin.

To the north the Flinders Ranges are of greater height and sharper outline than their southern counterpart. St Mary Peak of 1 166 metres is the highest point. North of Peterborough there is a divergence from the main range which stretches *via* the Olary Ridges to the Barrier Range and Broken Hill. In the far north the ranges again diverge; one spur circling the northern end of Lake Torrens and the other ending north of Lake Frome. The Flinders Ranges contain some unusual basins of which Wilpena Pound is perhaps the best known.

The Mount Lofty-Flinders chain has an important climatic influence which results in higher rainfall in the plains to the west of the ranges, and in the ranges themselves, with relatively dry conditions in the Murray Basin.

The western half of the State is largely occupied by a low plateau over which an intermittent series of low ranges, including the Warburton, Stuart, Denison, Peake, and Everard Ranges, stretch from the Flinders to the somewhat higher Musgrave Ranges in the far north-west. Mount Woodroffe (1 440 metres), the highest point in the State, is located in the Musgrave Ranges.

The comparatively low hills of the Gawler Ranges form the northern side of the Eyre Peninsula triangle, and to the west of Whyalla lie the economically important Middle-back Ranges. Isolated peaks of volcanic origin are found in the extreme south-east of the State.

The River Murray, which drains approximately one-seventh of Australia, enters the sea in South Australia and is the State's only major river. The fall of the Murray is very slight, dropping less than twenty-two metres over the 642 kilometres between the border and the sea. For the 216 kilometres to Overland Corner the river occupies a wide valley

and then passes through a narrower steeper-sided valley to Lakes Alexandrina and Albert at its heavily silted mouth.

Surrounding the northern Flinders Ranges is a series of vast lakes which are in reality lakes only after particularly heavy rainfall, normally appearing as shallow depressions with a salt or clay encrusted surface. Lake Eyre, the largest of these, is fifteen metres below mean sea level and is fed by a series of intermittently flowing rivers, including the Finke, the Diamantina and Cooper Creek, which traverse the plains of the north-east, constituting one of the largest areas of internal drainage in the world. To the south of Lake Eyre are Lakes Gairdner, Frome and Torrens, the last named being 240 kilometres in length.

### **General Geological Background**

The physiography of the State very accurately outlines the geological features, the areas of higher relief being the basement rocks protruding as cores or ridges through the flat-lying younger sediments of the basin areas.

The main physiographic feature is the Kangaroo Island-Mount Lofty-Flinders Ranges arc of hills, which, although of no great elevation, extends over a distance of 800 kilometres. The rocks of this arc, which are predominantly ancient sediments, have been folded and faulted in a spectacular manner providing many classic examples of textbook tectonics; they owe their present prominence to repeated fold and uplift movements throughout geological time. The hills of the chain rise from the coastal plains of Gulf St Vincent to the west, the plains of the River Murray to the east, and the Lake Frome and Lake Eyre plains in the north-east and north. The basement rocks are also exposed to the west of Spencer Gulf, but are more completely levelled off, and constitute a geological shield of greater antiquity than the Mount Lofty arc.

In the far north-west of the State, the ancient basement is again exposed in the east-west trending hills of the Musgrave and Everard Ranges. These ranges form the northern boundary of the Great Victoria Desert which, with the great coastal Nullarbor Plain, covers the western half of the State.

There is thus a broad geological picture of ancient crystalline or partly crystalline folded rocks forming highland chains and provinces, surrounded by relatively young and soft flat-lying sediments which have accumulated in deep troughs and basins during periodic transgressions and regressions of the sea throughout most of geological time.

It is in the hard rock provinces that are found the deposits of minerals and rocks which have played an important role in the industrial development of the State. The basin areas are important as sources of artesian water and are the areas in which important oil and natural gas discoveries have been made.

In general, the younger sediments of the basin areas do not provide good agricultural soils except in the higher rainfall areas of the south and south-east of the State, while the best agricultural lands lie in the hard rock provinces of the Gawler-Barossa-Clare regions of the central ranges where relatively good rainfall is associated with more mature soil conditions.

A more complete discussion on the geology of South Australia was included on pages 3-18 of the *South Australian Year Book* 1970.

### **Seismicity**

The most active area of the Australian continent is that of the South Australian seismic zones. The South Australian area has been monitored since 1962 by a small network of stations operated by the University of Adelaide.

The South Australian epicentres occur mainly in two belts, the major one being within the Adelaide Geosyncline and referred to as the Adelaide Seismic Zone. It extends from

Kangaroo Island through the Mount Lofty and Flinders Ranges to Leigh Creek in the north. The epicentres generally follow the ranges and also the western boundary of the Upper Proterozoic Sequence and the fold trends in that part of the Geosyncline curving around to the east of Lake Torrens. The other main South Australian seismic zone is on Eyre Peninsula.

A discussion on earthquakes in South Australia was included on pages 18-19 of the *South Australian Year Book* 1970.

### Eclipses

A special article on eclipses was included on pages 5-11 of the *South Australian Year Book* 1977.

## 1.2 CLIMATE AND METEOROLOGY

In the Southern Hemisphere, because of the extensive ocean areas and the absence of a broad land mass connecting the Antarctic with the tropical regions, the southern continents are not subject to the same range of weather extremes that are experienced in northern countries at similar latitudes. The ameliorating effect of this land-sea distribution is particularly noticeable in southern South Australia.

Briefly, the basic features of the South Australian climate are hot, dry summers with relatively mild nights, and cool but not severe winters with most rainfall occurring during the months of May, June, July and August.

### METEOROLOGICAL OBSERVATIONS

Meteorological services throughout Australia are administered by the Commonwealth Bureau of Meteorology and the Regional Office of the Bureau in Adelaide directs operations throughout the State. In South Australia daily weather reporting stations are established at nearly eighty representative localities and there are over 900 rainfall recording stations.

Station weather observations telegraphed several times a day provide the basic information for the weather forecasting and warning services provided by the Regional Forecasting Centre, Adelaide. These observations are also collated in bulletins, maps and reports issued for public information. The reports include climatic surveys which are studies of climatic variations over defined regions of the State.

### RAINFALL

#### Average Annual Rainfall

South Australia is by far the driest of the Australian States and Territories with just over four-fifths of the State receiving an average of less than 250 millimetres of rain annually. Over the southern half of South Australia the main source of rain is from showers associated with unstable moist westerly airstreams occurring fairly regularly during winter. The wettest part of the State is in the Mount Lofty Ranges, immediately east of Adelaide in the vicinity of Mount Lofty, where the average annual rainfall is about 1 200 millimetres.

As can be seen from the map on page 7, the isohyets generally show highest annual averages along the ranges and southern parts of the coast. The means decrease rapidly to less than 250 millimetres within 150 to 250 kilometres inland, and then decrease more gradually to below 150 millimetres in the vicinity of Lake Eyre. This area is the driest part of Australia and there have been several periods when the annual totals were less than 75 millimetres during consecutive years.

An indication of the shortage of rain in the State is given in the following table which compares the relative distribution of rainfall in South Australia and in Australia as a whole.

Distribution of Rainfall, South Australia and Australia

Average Annual Rainfall	Proportion of Total Area	
	South Australia	Australia
	Per cent	Per cent
Under 250 mm .....	82.6	38.8
250 mm and under 400 mm .....	9.1	19.8
400 mm and under 500 mm .....	4.5	11.2
500 mm and under 600 mm .....	2.6	9.5
600 mm and under 750 mm .....	0.8	7.5
750 mm and under 1 000 mm .....	0.4	6.2
1 000 mm and over .....	(a)	7.0
Total .....	100.0	100.0

(a) Less than 0.05 per cent—an area of the order of 750 hectares in the Mount Lofty Ranges.

Mean monthly rainfalls at selected recording stations are shown in the table below.

Mean Rainfall and Days of Rain: Selected Stations, South Australia

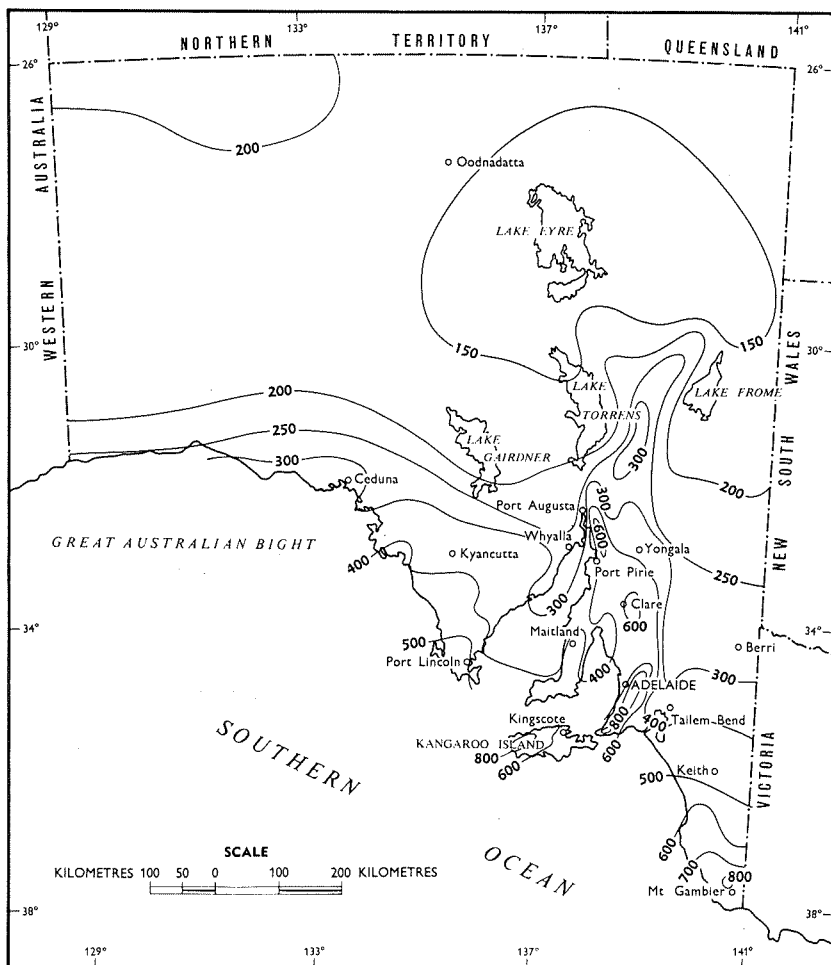
Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
MEAN RAINFALL (a) (millimetres)													
Adelaide (West Tee) .....	20	21	24	44	68	72	66	61	51	44	31	26	528
Ceduna .....	10	17	18	21	41	34	39	36	29	26	23	18	312
Clare .....	26	25	25	48	75	80	81	78	72	58	36	29	633
Kingscote .....	15	17	18	36	59	73	77	64	46	36	24	19	484
Kyancutta .....	13	18	13	20	37	40	42	41	33	27	24	19	327
Maitland .....	17	22	21	44	62	69	66	62	50	43	29	22	507
Mount Gambier .....	25	31	33	60	72	78	100	90	69	64	49	37	708
Oodnadatta .....	23	28	14	12	16	12	11	10	11	13	11	14	175
Port Augusta .....	15	17	17	19	26	27	20	23	22	23	18	16	243
Port Lincoln .....	13	15	19	37	58	75	77	67	49	35	22	18	485
Port Pirie .....	18	19	17	29	40	41	33	35	35	33	23	21	344
Stirling .....	39	37	44	96	143	183	161	156	124	99	61	48	1 191
Tailem Bend .....	18	23	21	29	41	39	38	40	39	39	29	26	382
Whyalla .....	19	25	16	19	28	25	22	25	25	27	22	20	273
Yongala .....	21	21	16	26	37	41	39	44	39	34	28	24	370
AVERAGE NUMBER OF DAYS OF RAIN (b)													
Adelaide (West Tee) .....	4	4	5	9	13	15	16	16	13	11	8	6	120
Ceduna .....	4	4	4	7	11	10	13	12	11	8	6	4	94
Clare .....	4	4	5	8	13	14	16	15	13	11	7	6	116
Kingscote .....	3	4	5	9	13	16	18	16	13	10	6	5	118
Kyancutta .....	3	3	3	6	11	10	13	13	11	7	5	5	90
Maitland .....	4	4	5	9	12	14	15	15	12	10	7	5	112
Mount Gambier .....	8	9	11	15	18	18	22	21	18	18	14	12	184
Oodnadatta .....	3	3	2	2	3	3	2	3	3	3	3	3	33
Port Augusta .....	2	2	3	4	6	8	8	6	6	6	4	3	60
Port Lincoln .....	4	4	5	10	14	16	18	17	13	11	7	6	125
Port Pirie .....	3	3	3	5	8	10	10	10	8	7	5	4	76
Stirling .....	6	6	7	12	15	17	19	18	15	14	10	8	147
Tailem Bend .....	4	4	4	7	11	11	13	13	11	9	7	6	100
Whyalla .....	3	3	3	5	7	7	8	8	7	6	4	4	65
Yongala .....	4	4	4	6	10	12	13	13	10	8	6	5	95

(a) For all years of record to end of 1982 except for Adelaide (see page 16). (b) Days receiving 0.2 millimetres or more.

# SOUTH AUSTRALIA AVERAGE ANNUAL RAINFALL

Based on all years of records

Isohyets in millimetres



### Seasonal Distribution of Rainfall

Those areas of the State with the higher average annual totals also show a marked winter maximum of rainfall. From November to March the fall is slight, but rarely is completely absent. However, a high rate of evaporation during the summer means that in general these summer rains are not significant from the agricultural point of view. The first significant falls generally arrive during April or May; June, July and August are usually the wettest months, with rains tending to show a marked decrease during September and October.

By contrast, the occurrence of rain over interior districts is quite erratic, but southern parts of the interior still exhibit a discernible trend for winter maxima. Records collected over the years from this northern half of the State show that heavy rains of up to 75 millimetres may occur in any month of the year, but at least two or three months without any significant rain at all are experienced practically every year.

### Rainfall Intensity

Long sustained periods of intense rainfall are rare in South Australia. However, occasionally there are very intense falls lasting only a few minutes—for example in Adelaide several falls at a rate of more than 100 millimetres an hour over a five-minute period have been recorded. These were thunderstorm rains, and intense falls can cause considerable damage to crops and to light or freshly worked soils.

The most notable falls of rain which have been recorded by official rainfall observers within a period of 24 hours ending at 9 a.m. were at:

Stansbury (18 February 1946) .....	222 mm
Stirling (17 April 1889) .....	208 mm
Ardrossan (18 February 1946) .....	206 mm
Oodnadatta (9 February 1976) .....	200 mm
Carpa, 25 km SW of Cowell (18 February 1946) .....	199 mm
Innaminka Station (28 January 1974) .....	189 mm

Several other exceptional rainfalls have been recorded by private observers including 228 millimetres in four hours at Dutton (near Truro) on 2 March 1983 (during this storm a fall in excess of 300 millimetres occurred at a nearby property), 226 millimetres in 24 hours at Spring Mount on 26 January 1941 and 191 millimetres near Buckleboo on 26 January 1981.

Other Yorke Peninsula towns besides Stansbury and Ardrossan also recorded over 175 millimetres on 18 February 1946. These, however, are very much below the 24 hour falls which have been recorded in tropical parts of Queensland and Western Australia. At Bellenden Ker (in Queensland) 1 140 millimetres were recorded in the 24 hour period ending 9 a.m. on 4 January 1979. The next day a further 807 millimetres were recorded at the same station. More than twenty other centres in Queensland have had daily readings exceeding 600 millimetres.

### Snow and Hail

The occurrence of snow in South Australia is rare and mainly confined to the Mount Lofty Ranges and southern Flinders Ranges. Most falls are very light and do not persist for a long period because of the relative warmth of the ground. Collated reports of snow in the Mount Lofty Ranges show a total of 136 days of snow experienced over a period of 143 years to the end of 1983. While most falls have occurred during the months



June to September snow has been experienced as early as 25 April (1916) and as late as 3 December (1955).

Hail falls most frequently about the southern coasts and ranges during the winter. Further to the north, hail can be experienced with summer thunderstorms and some of the largest hailstones have been reported from northerly parts of the State. Tornadoes and tornadic squalls are, in almost all cases, accompanied by hail.

### Floods

Various areas of South Australia are prone to localised flooding. However, most local flooding is associated with intense rainfall, and consequently, is of comparatively short duration. Exceptions have occurred in parts of the south-east and far north of the State where, because of topography and soil factors, stretches of water can persist for days and even weeks.

Extensive rises in the River Murray levels have at times caused damage to levees and installations along the banks. During 1956, following an excessive snow melt in the Australian Alps, prolonged flooding was experienced in many areas adjacent to the main course.

### Droughts

When abnormally dry conditions persist over wide areas for long periods of time, drought, the worst of all Australian climatic hazards, is experienced. The drought years in the pastoral districts of South Australia were 1863-67, 1896-98, 1901-03, 1913-16, 1926-30, 1939-40, 1943-45, 1959-62, 1965 and 1982. For the settled areas the years were 1859-60, 1884-86, 1895-98, 1911-15, 1928-29, 1943-45, 1959, 1967, 1976-77 and 1982.

The driest year in terms of actual rainfall was 1967, when an all-time low figure for the year of 257 millimetres was recorded in Adelaide. However, the 1914 drought is generally recognised as being the most severe experienced. In that year the River Murray was reduced to a series of waterholes in some places. The drought of 1982 was probably as severe as that in 1914. In both years almost all of the wheatgrowing areas of the State received very much below average rainfall (in the first decile range). That was especially true for the period May to October which constitutes the cereal growing season. The lack of rain resulted in very poor cereal yields.

Periods during which no significant rain falls are more prolonged in the northern districts than near the coast. In northern parts stock grazing, rather than cereal growing, is the main rural industry. Lack of rain can result in lack of plant growth leading to deterioration of feed and ultimately degradation of the land with heavy stock losses. Much work on rainfall variability and drought frequency has been done in recent years: the Bureau of Meteorology publishes the *Drought Review* periodically in conjunction with the *Monthly Rainfall Review* to provide current information for the whole of Australia.

The Bureau of Meteorology has also produced reference works including *Droughts in Australia* by J. C. Foley (Bulletin No. 43) and *Rainfall Deciles as Drought Indicators* by W. J. Gibbs and J. V. Maher (Bulletin No. 48) in addition to the detailed discussion with special reference to rainfall deciles which appeared on pages 8-10 of the *South Australian Year Book* 1967.

### Rainfall Probability

A special article on rainfall probability, *i.e.* the likelihood, expressed as a percentage, that a minimum rainfall will be received during a stipulated period, was included on pages 6-9 of the *South Australian Year Book* 1966.

## TEMPERATURE

## Seasonal Temperature Conditions

Air temperature is normally recorded under standard conditions in a Stevenson Screen. Isotherms of the average maximum temperatures in a mid-summer month (January) and of the average minimum temperature in a mid-winter month (July) are shown on the maps on pages 12 and 14 respectively. The isotherms are more or less parallel to the coastline but the cooling effect associated with higher altitudes of the Mount Lofty and Flinders Ranges is clearly shown.

From December to February it is generally warm to hot throughout the State but sea breezes frequently bring some relief to the coastal districts. In locations more than 75 to 150 kilometres inland maximum daily temperatures usually exceed 32.5°C and are quite often over 37.5°C. In general, areas to the north of the 32.5°C isotherm on the January map average more than twenty days annually during which the maximum temperature exceeds 37.5°C. It is only on the extreme south-east coastal fringe and Kangaroo Island where the average number of such 'very hot days' is less than five a year. Air masses prevalent at this time of the year are relatively dry; hence cooling during the night is marked—a fall of 10°C to 20°C from day to night is usual.

During March temperatures begin to fall and continue to do so during April and May, the first frosts of the year often being experienced during this period. The three coldest months are June, July and August, with the coldest areas along the highlands. In those parts of the State east and south-east of the ranges, the mean temperature for the latter months is near or just below 10°C, and these low temperatures cause vegetation growth to become very slow, although it does not cease altogether.

In the spring months, September to November, with gradually rising temperatures and longer hours of sunshine, crops and pastures grow rapidly. Severe frosts during this period can cause considerable damage to fruit crops during the bud, flower and small fruit stages. When hot, dry, northerly winds persist over the State for two or more consecutive days, developing crops may suffer stress.

Monthly mean maximum and minimum temperatures at seventeen selected recording stations within the State are shown in the following tables. These are based as nearly as possible on a standard period except for the figures for Adelaide (Kent Town) which are estimates based on a comparison of readings taken between 1977 and 1979 at the Kent Town and West Terrace observation sites.

Mean Maximum Temperatures: Selected Stations, South Australia

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
	°Celsius												
Adelaide (Kent Town) .....	28.8	28.8	26.2	22.1	18.5	15.6	14.9	16.1	18.4	21.5	24.7	27.2	21.9
Berri .....	31.2	30.2	28.2	22.6	18.9	15.9	15.4	17.2	20.7	23.5	26.9	29.6	23.4
Ceduna .....	28.4	27.9	26.5	24.0	20.5	18.1	17.2	18.3	21.0	23.5	25.7	27.1	23.2
Clare .....	29.4	29.1	26.2	21.3	16.9	13.8	12.9	14.5	17.3	20.8	24.6	27.5	21.2
Keith .....	29.9	29.5	26.9	22.2	18.0	15.5	14.8	15.9	18.4	21.3	24.4	27.4	22.1
Kingscote .....	23.5	23.3	22.0	19.6	17.2	15.2	14.4	14.8	16.3	18.3	20.4	22.3	18.9
Kyancutta .....	32.8	32.0	30.0	25.0	21.0	17.7	17.0	18.1	21.6	25.0	28.3	30.8	24.9
Maitland .....	28.5	28.2	25.5	21.9	17.7	15.3	14.2	15.1	17.2	20.9	23.9	25.9	21.2
Mount Gambier .....	25.1	24.6	22.7	19.0	15.7	13.7	13.0	13.9	15.6	17.6	19.8	22.5	18.6
Oodnadatta .....	37.3	36.2	33.6	28.0	22.9	19.7	19.5	21.6	26.0	30.1	33.4	36.1	28.7
Port Augusta .....	32.0	31.8	29.6	25.2	21.1	17.5	17.0	19.0	22.4	25.6	28.6	30.8	25.0
Port Lincoln .....	25.3	24.9	23.9	21.4	18.8	16.4	15.8	16.5	18.1	20.0	21.9	23.7	20.6
Port Pirie .....	31.7	31.4	29.4	24.6	20.2	17.1	16.3	17.9	20.7	24.4	27.4	29.9	24.3
Stirling .....	24.9	24.3	22.8	18.0	14.4	11.6	10.6	11.8	14.6	16.9	19.9	22.6	17.7
Taillem Bend .....	29.5	28.7	26.9	23.1	18.9	16.2	15.6	16.6	19.8	22.4	24.8	27.0	22.4
Whyalla .....	28.6	28.3	25.7	23.0	20.0	17.6	16.4	17.7	20.2	22.4	25.5	26.7	22.7
Yongala .....	29.9	29.6	26.6	21.3	16.7	13.1	12.3	14.0	17.3	21.4	25.4	28.4	21.3

## Mean Minimum Temperatures: Selected Stations, South Australia

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
	°Celsius												
Adelaide (Kent Town) .....	15.9	16.2	14.5	11.9	9.5	7.5	6.5	7.1	8.4	10.5	12.7	14.8	11.3
Berri .....	15.3	14.9	13.4	10.2	7.8	6.1	5.3	6.0	7.8	10.0	12.2	14.1	10.3
Ceduna .....	14.9	14.9	13.1	10.7	8.4	6.5	5.7	6.1	7.7	9.7	12.0	13.7	10.3
Clare .....	13.7	13.8	11.5	8.3	5.8	4.3	3.3	3.9	5.1	7.4	9.9	12.1	8.3
Keith .....	12.6	12.8	11.1	9.0	7.2	5.6	5.2	5.5	6.4	8.1	9.6	11.5	8.8
Kingscote .....	14.6	15.2	14.1	12.3	10.6	9.2	8.3	8.1	8.9	10.2	11.7	13.3	11.4
Kyancutta .....	15.7	14.0	12.2	9.3	7.2	5.2	4.7	4.8	6.1	8.1	10.4	12.6	9.1
Maitland .....	15.1	15.5	14.2	12.1	9.6	7.6	6.8	6.9	7.9	9.8	11.5	13.5	10.9
Mount Gambier .....	10.7	11.4	10.1	8.4	7.0	5.4	4.9	5.1	5.8	6.9	7.9	9.6	7.8
Oodnadatta .....	22.5	22.0	19.2	14.1	9.6	6.7	5.7	7.1	10.9	15.0	18.1	20.9	14.4
Port Augusta .....	18.6	18.9	16.8	13.3	10.1	7.8	6.7	7.7	9.8	12.6	15.3	17.5	12.9
Port Lincoln .....	15.2	15.5	14.6	12.7	10.9	9.2	8.3	8.2	9.0	10.4	12.1	13.8	11.7
Port Pirie .....	17.2	17.4	15.8	12.8	10.3	8.2	7.5	7.9	9.4	11.6	13.9	15.9	12.3
Stirling .....	11.5	11.6	10.6	8.6	6.8	5.3	4.6	4.8	5.9	7.1	8.7	10.2	7.9
Tailm Bend .....	13.8	13.9	12.3	10.2	8.3	6.0	5.5	5.9	7.2	8.8	10.7	12.4	9.5
Whyalla .....	18.1	18.9	17.2	13.6	10.7	8.5	7.4	8.1	9.9	12.6	14.7	16.6	13.1
Yongala .....	13.2	13.4	10.8	7.3	4.7	3.1	2.3	2.7	4.0	6.2	9.2	11.7	7.4

The highest temperature recorded in South Australia was 50.7°C at Oodnadatta on 2 January 1960, and the lowest -8.2°C at Yongala on 20 July 1976.

## HUMIDITY

'Relative humidity' at a particular temperature is the ratio of the actual vapour pressure to the saturated vapour pressure (at that temperature) expressed as a percentage. Since relative humidity depends not only on the actual water vapour content of the air but also on air temperature, there is a tendency for highest relative humidities to be associated with low temperatures during the early morning hours, and conversely, the lowest relative humidity values tend to occur during the warmest part of the afternoon when measurements of under 20 per cent are common.

The average index of mean relative humidity has been derived from the ratio of the average 9 a.m. vapour pressure to the saturation vapour pressure at the average mean temperature. Being thus related to the mean temperature this value of relative humidity is a good approximation of the daily mean.

With an average index of mean relative humidity of under 35 per cent in summer increasing to about 50 per cent in winter, the far northern parts of the State experience the lowest values of relative humidity in South Australia. By comparison, most southern parts of the State have an average index of mean relative humidity of about 45 to 55 per cent in summer, increasing to about 70 to 80 per cent in winter.

## SUNSHINE AND CLOUD

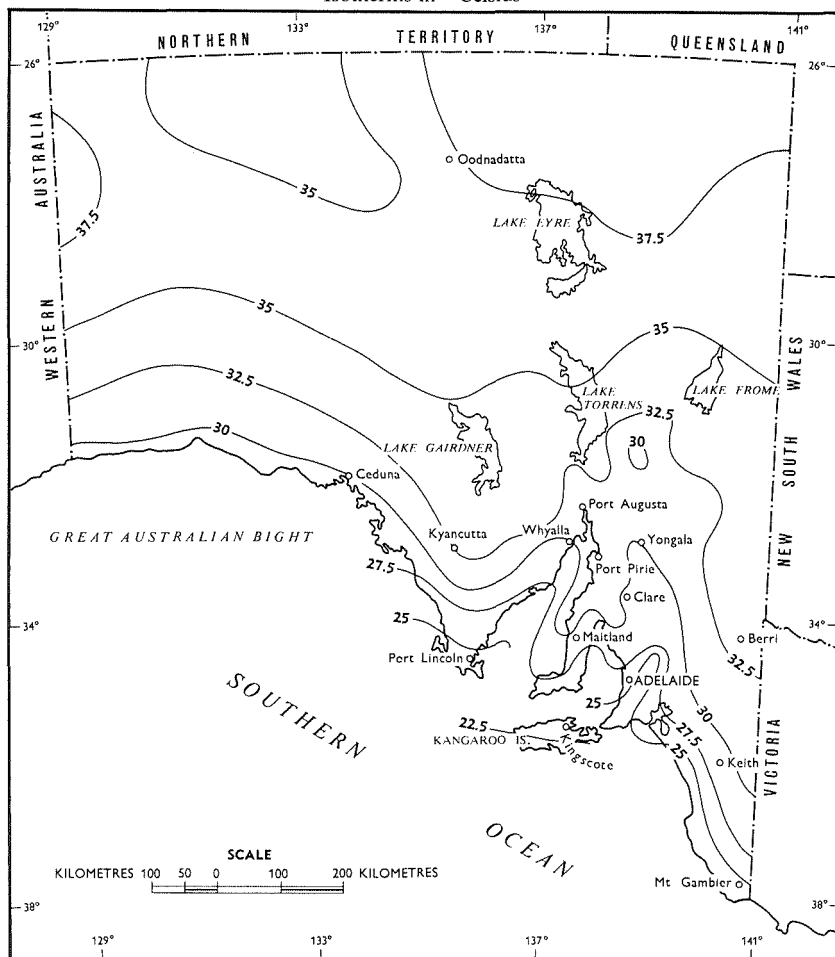
The annual average sunshine total (as determined from records of sunshine and average cloudiness) ranges from about 2 000 hours along parts of the southern coastal fringe to 3 500 hours near the northern border of the State. Adelaide has an average of just over 2 500 hours a year.

December and January tend to be the sunniest months with daily averages reaching a maximum of about 10.5 hours over interior districts. During the June and July winter months daily averages are still as high as seven hours in the far north interior, but over the southern coastal fringe the daily average of just over eight hours for summer is reduced to about three hours during winter.

# SOUTH AUSTRALIA MEAN MAXIMUM TEMPERATURE: JANUARY

Based on all years of records

Isotherms in ° Celsius



## WIND

During the summer months winds from the southern quadrants are the most prevalent and a well-defined sea breeze is common along the whole of the coastal fringe from

October right through to about April and May. During the winter months the north-westerly predominates, but the proportion of west to south-west winds is also relatively high.

South Australia is not subject to the type of sustained wind storms associated with tropical cyclones as in Queensland and tropical Western Australia. However, gales do occur from time to time along the coast during the winter and cause minor damage to buildings and foreshore works. Probably the most noteworthy storm was on 11 April 1948 when wind averaged over 60 km/h for six hours in central and south-eastern districts, the naval frigate *Barcoo* was grounded at Glenelg and the Glenelg jetty was wrecked. Frequent gusts over 100 km/h and a strongest gust of 130 km/h were recorded in Adelaide.

Most violent wind squalls are associated with thunderstorms and usually last only a few minutes. It was during such squalls that the highest wind gusts were recorded in South Australia—167 km/h at Woomera on 14 November 1979, 158 km/h at Woomera on 4 November 1969, 152 km/h at Edinburgh RAAF Base on 2 March 1983, 148 km/h at Leigh Creek on 3 December 1953 and also at Adelaide on 13 July 1964.

### EVAPORATION

Evaporation is currently determined by many Australian authorities by measuring the amount of water evaporated from a free water surface exposed in a standard tank or pan. Before 1967, measurements were made using the sunken tank method *i.e.* tanks, each 0.91 metres internal diameter and 0.91 metres deep, sunk into the soil so that the rim was only 25 millimetres or so above the ground.

Early in 1967 a change-over to the American Class A evaporation pan was made after this instrument had been accepted as the standard evaporimeter for Australia. These pans, 1.21 metres in diameter and 0.25 metres deep, are placed above ground level on wooden pallets. Wire mesh guards are fitted to the pans to prevent birds and stray animals drinking from them.

The annual average evaporation varies from below 1 600 millimetres in parts of the Mount Lofty Ranges and the lower South East to more than 3 600 millimetres over an area around and to the north-east of Oodnadatta in the far north of the State.

About half the State has an average evaporation rate exceeding 3 000 millimetres a year. This high rate is all the more significant when it is considered that the average annual rainfall over most of the northern half is less than 200 millimetres.

### CLIMATE OF ADELAIDE

The longest continuous series of weather observations in the Southern Hemisphere started in Adelaide in November 1836 when Sir George Kingston commenced rain gauge readings at his property on the corner of Grote Street and West Terrace. Unfortunately, the earliest figures were mislaid and records are available only from the beginning of 1839. No other regular observations were made until Sir Charles Todd arrived to fill the post of Superintendent of Telegraphs and Government Astronomer in 1856.

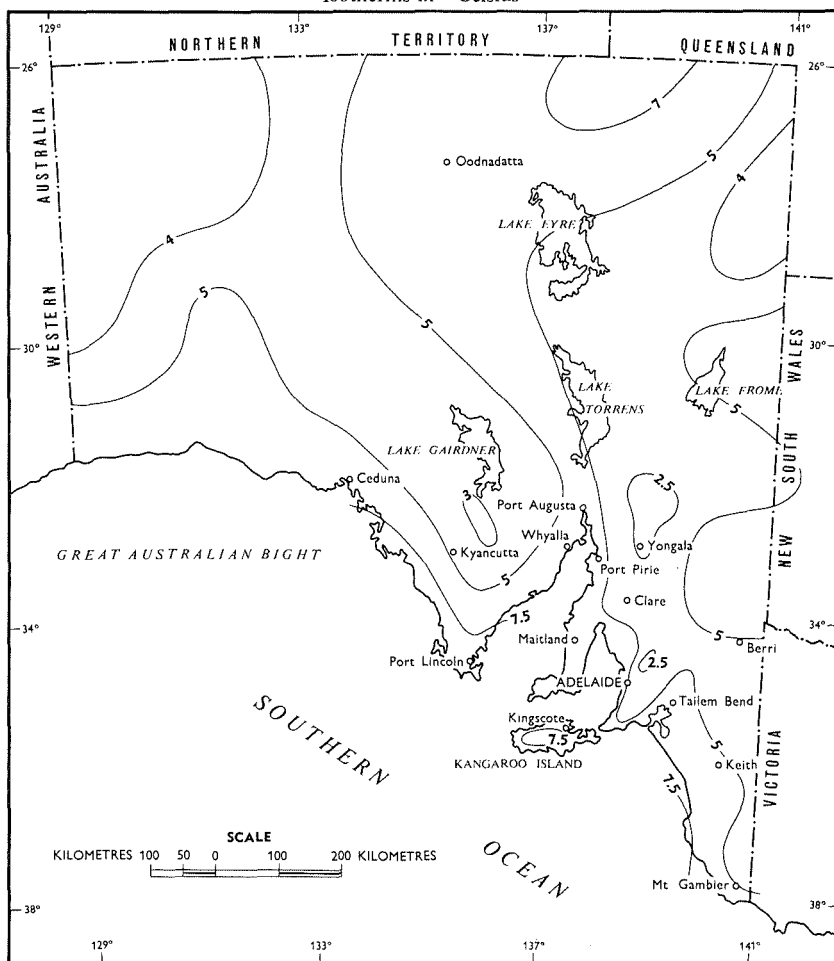
In May 1860 the Observatory on West Terrace was completed and the instruments were moved to that site. For over 100 years the observation site at Adelaide remained practically unchanged. Minor shifts occurred in 1940 and 1962 but these were within 100 metres of the original observatory site.

In February 1977, the Adelaide Regional Office of the Bureau of Meteorology moved from West Terrace to College Road, Kent Town. Although a new observation site was set up at Kent Town, observations continued at West Terrace until February 1979 in order to compare the two sites.

# SOUTH AUSTRALIA MEAN MINIMUM TEMPERATURE: JULY

Based on all years of records

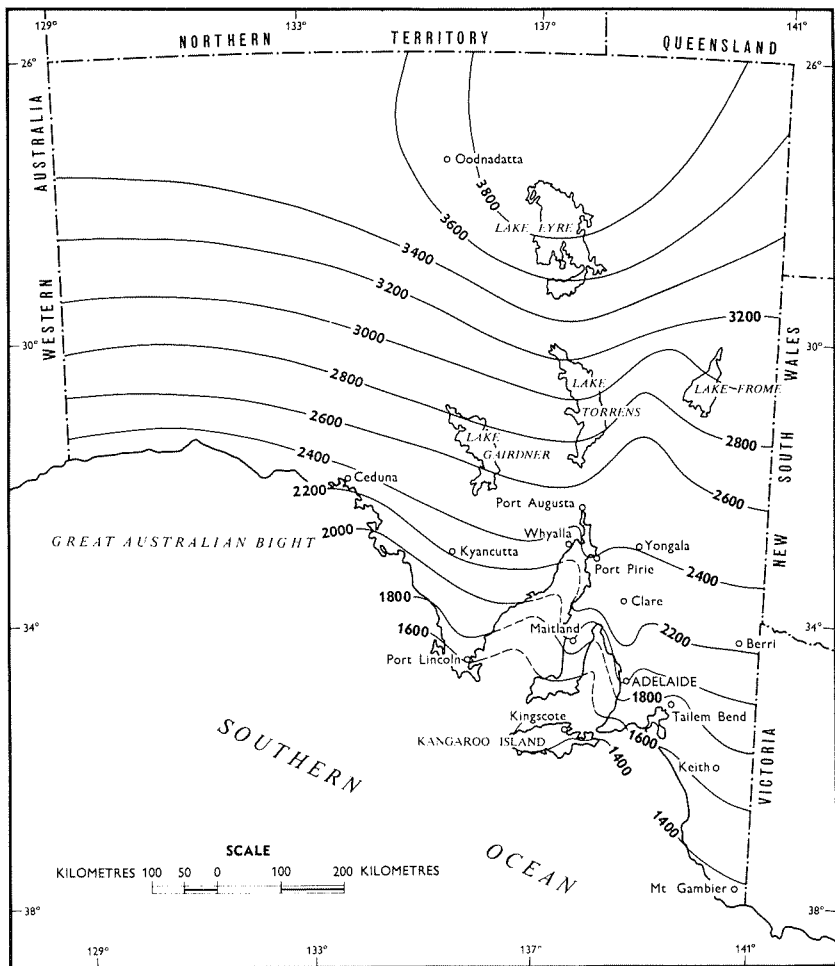
Isotherms in ° Celsius



Statistics derived from the long-standing West Terrace site, now demolished, serve as a valuable basis for describing the climate of the City of Adelaide and will continue to be useful guides to the future conditions—figures for West Terrace are therefore shown.

# SOUTH AUSTRALIA AVERAGE ANNUAL EVAPORATION

Based on all years of records in millimetres,  
for a Class A Pan with Birdguard



Temperature records at Adelaide date from 1857, when readings were first taken from a thermometer placed in a screen known as a Greenwich Stand which failed to protect the thermometer fully from reflected radiation. In 1887 a new series of readings using a standard Stevenson Screen was introduced and this showed maximum temperatures during the warmer months to be  $1^{\circ}$  to  $1.5^{\circ}\text{C}$  lower on average. Other temperatures were not significantly affected. Both screens were in continuous operation until 1947 when use of the Greenwich Stand was discontinued. However, the Greenwich Stand readings remained the official record until 1947, thus there is a slight discontinuity in the temperature records in that year and means are weighted towards the Greenwich Stand method of measurement.

Adelaide is the driest of Australia's capital cities, having less rainfall and a lower relative humidity than any other capital. Summer maximum temperatures are high and the record of  $47.6^{\circ}\text{C}$  in the Greenwich Stand on 12 January 1939 is the highest recorded in any of the capital cities.

### Temperature

In the summer months, Adelaide maximum temperatures frequently exceed  $30^{\circ}\text{C}$  and from time to time 'heat waves', with readings at or near  $35^{\circ}\text{C}$  for several consecutive days, are experienced. The outstanding heat wave was in January 1939 when fourteen days out of fifteen exceeded  $30^{\circ}\text{C}$  and of those fourteen days thirteen exceeded  $35^{\circ}\text{C}$  and six exceeded  $40^{\circ}\text{C}$ . During this heat wave the record temperature of  $46.8^{\circ}\text{C}$  recorded on 26 January 1858 was exceeded, first on 10 January 1939 when the temperature reached  $47.2^{\circ}\text{C}$  and then two days later on 12 January when the highest ever temperature of  $47.6^{\circ}\text{C}$  ( $46.1^{\circ}\text{C}$  in the Stevenson Screen) was recorded.

July is usually the coldest month, when the mean maximum is  $15^{\circ}\text{C}$ . However, the extreme lowest minimum recorded is  $-0.4^{\circ}\text{C}$  on 8 June 1982. August is only slightly warmer than July, but after August steadily rising temperatures are experienced.

### Climatological Data, West Terrace, Adelaide

(1) *Temperature and Relative Humidity based on a composite record of Greenwich Stand and Stevenson Screen observations*

Month	Temperature					Relative Humidity (9 a.m.)		
	Maximum		Minimum		Mean	Mean	Highest Monthly Mean	Lowest Monthly Mean
	Mean	Highest Recorded	Mean	Lowest Recorded				
Years of Record	122	122	122	122	122	109	109	109
	°Celsius					Per cent		
January .....	29.5	47.6	16.4	7.3	23.0	41	59	29
February .....	29.3	45.3	16.6	7.5	23.0	44	63	30
March .....	26.8	43.6	15.1	6.6	21.0	47	62	29
April .....	22.7	37.0	12.6	4.2	17.7	57	72	37
May .....	18.7	31.9	10.3	2.7	14.5	67	77	49
June .....	15.8	25.6	8.3	0.3	12.1	75	84	63
July .....	15.0	26.6	7.3	0.0	11.1	76	87	66
August .....	16.4	29.4	7.8	0.2	12.1	70	80	54
September .....	18.9	35.1	9.0	0.4	13.9	61	72	44
October .....	22.0	39.4	10.9	2.3	16.5	52	67	29
November .....	25.1	45.3	12.9	4.9	19.1	45	64	31
December .....	27.7	45.9	15.0	6.1	21.3	42	56	31
Year .....	22.3	47.6	11.9	0.0	17.1	56	87	29



## Climatological Data, West Terrace, Adelaide (continued)

## (2) Rainfall and Wind

Month	Rainfall				Wind			
	Mean	Highest Monthly and Yearly Total	Highest in One Day	Mean Days of Rain (a)	Average Speed	Highest Gust	Prevailing Direction	
							9 a.m.	3 p.m.
Years of Record	140	140	140	140	21	60	30	30
	mm	mm	mm	No.	km/h	km/h		
January .....	20	84	58	4	13	116	SW	SW
February .....	21	155	141	4	12	106	NE	SW
March .....	24	117	89	5	11	126	S	SW
April .....	44	154	80	9	11	130	NE	SW
May .....	68	197	70	13	11	113	NE	NW
June .....	72	218	54	15	12	108	NE	N
July .....	66	138	44	16	12	148	NE	NW
August .....	61	157	57	15	13	121	NE	SW
September .....	51	148	40	13	13	111	NNE	SW
October .....	44	133	57	11	13	121	NNE	SW
November .....	31	113	75	8	13	130	SW	SW
December .....	26	101	61	6	13	121	SW	SW
Year .....	528	786	141	119	12	148	NE	SW

## (3) Other Conditions

Month	Mean Daily Sunshine	Clear Days (b)	Mean Amount of Cloud (c)	Days of Fog	Days of Lightning	Amount of Evaporation (d)	Vapour Pressure 9 a.m.	Mean Barometric Pressure (e)
Years of Record	95	58	107	77	105	12	108	121
	Hours	No.		No.	No.	mm	mb	mb
January .....	10.0	12.4	3.1	0.0	2.0	254	11.9	1013.2
February .....	9.3	10.9	3.3	0.0	1.7	216	12.5	1014.3
March .....	7.9	10.9	3.5	0.0	1.7	176	12.0	1017.2
April .....	6.0	6.6	4.5	0.0	1.4	120	11.5	1019.9
May .....	4.8	4.6	5.1	0.4	1.5	79	10.8	1020.1
June .....	4.2	4.0	5.3	1.1	1.5	56	10.0	1019.9
July .....	4.3	3.6	5.2	1.3	1.4	60	9.5	1020.0
August .....	5.3	4.9	4.9	0.6	1.7	78	9.7	1019.0
September .....	6.2	5.7	4.6	0.2	1.7	110	10.0	1017.7
October .....	7.2	5.7	4.5	0.0	2.6	164	10.2	1016.0
November .....	8.6	6.6	4.2	0.0	3.0	196	10.5	1015.0
December .....	9.4	9.0	3.7	0.0	2.2	241	11.3	1013.3
Year .....	6.9	85.0	4.3	3.6	22.4	1 750	10.8	1017.1

(a) Days receiving 0.2 mm or more of rain. (b) With less than two-eighths cloud. (c) Scale 0 (clear) to 8 (overcast) at 9 a.m. and 3 p.m. daily. (d) From Class A Pan (period 1967-1977). (e) Mean of 9 a.m. and 3 p.m. readings corrected to sea level.

## Rainfall

Adelaide's summer rainfall is light and unreliable. The average monthly fall from January to March is under 25 millimetres and completely rainless months in this period are common. In fact, each of the five months December to April has at some time been recorded as completely dry, and in the period January to March 1893 there were sixty-nine consecutive rainless days. However, heavy rain is occasionally experienced at this time of the year and on 7 February 1925 rainfall was 141 millimetres—a record for one day.

Each month from May to September rainfall averages over 50 millimetres and in this period the rain is fairly reliable. June is the wettest month but the average is still under 75 millimetres for the month. The 140 year annual rainfall average is 528 millimetres, and annual totals have ranged from a low of 257 millimetres in 1967 to a high of 786 millimetres in 1851.

### Other Conditions

Relative humidity in Adelaide is at its lowest in January when the average 9 a.m. reading (which approximates the average for the whole 24 hours) is 41 per cent. This low value of the relative humidity reduces the severity of heat waves in Adelaide. In fact, the relative humidity is very low for most months of the year, only becoming higher in winter, with the average at 9 a.m. reaching 76 per cent in July.

Adelaide is not subject to violent sustained wind storms. The prevailing wind during the day in summer is a south-westerly sea breeze which is well defined throughout the months October to April. Another common wind during summer, known locally as the 'gully wind', blows from the east or south-east out of the Adelaide Hills (more particularly at night) and becomes very strong and gusty at times. In winter the prevailing wind during the day is north-westerly with a high proportion of south-westerlies.

### Transfer of Bureau of Meteorology to New Site

Temperature and rainfall averages have been estimated for the Kent Town site. These are shown in the following tables with the long-term means for the discontinued West Terrace observations. The temperatures refer only to observations taken from the Stevenson Screen thus eliminating the bias introduced with Greenwich Stand readings.

**Comparison of Rainfall: West Terrace, Adelaide and Kent Town**

Site	Years of Record	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
Millimetres														
West Terrace, Adelaide:														
Long-term mean rainfall .....	140	20	21	24	44	68	72	66	61	51	44	31	26	528
Kent Town:														
Estimates of average rainfall .....	..	22	22	26	47	76	79	75	69	57	51	33	28	585

**Comparison of Temperature: West Terrace, Adelaide and Kent Town**

Site	Years of Record	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
°Celsius														
Maximum:														
West Terrace, Adelaide:														
Long-term mean														
temperature .....	92	28.5	28.5	26.0	22.1	18.5	15.7	14.9	16.0	18.3	21.3	24.3	26.8	21.7
Kent Town:														
Estimates of average														
temperature .....	..	28.8	28.8	26.2	22.1	18.5	15.6	14.9	16.1	18.4	21.5	24.7	27.2	21.9
Minimum:														
West Terrace, Adelaide:														
Long-term mean														
temperature .....	92	16.5	16.8	15.1	12.7	10.4	8.4	7.5	8.0	9.2	11.1	13.1	15.1	12.0
Kent Town:														
Estimates of average														
temperature .....	..	15.9	16.2	14.5	11.9	9.5	7.5	6.5	7.1	8.4	10.5	12.7	14.8	11.3

From these tables the estimated average maximum temperatures at Kent Town vary from 0.4°C higher than at West Terrace in December to 0.1°C lower during June.

Estimated average minimum temperatures at Kent Town are all lower than the corresponding average temperatures at West Terrace. Differences range from 0.3°C in December to 1.0°C in July.

Rainfall was recorded at West Terrace for 140 years, the longest continuous record in the Southern Hemisphere. The estimated average annual total for Kent Town is 11 per cent higher than at West Terrace. However, monthly means range from 5 per cent higher in February to 14 per cent higher in July.

It follows that it is likely that new extreme temperature and rainfall readings will be recorded for 'Adelaide' at the Kent Town site. Such occurrences should not be compared with extremes that have been recorded at West Terrace. A new series of climatological statistics has been started for the Kent Town site and this will be kept separate from the West Terrace data.

### WEATHER CONDITIONS IN SOUTH AUSTRALIA, 1984

#### Summer 1983-84

Summer rainfall in the pastoral areas was much above normal owing to extreme falls in the period 7-14 January 1984. Some extreme January gaugings are listed below.

Summer rainfall was slightly above average in the Riverlands, Murray Mallee and Upper South East districts. Seasonal rainfall was about 30 per cent below normal in most remaining districts but in the Adelaide Plains, Kangaroo Island, Yorke Peninsula and Western Agricultural districts it was in excess of 40 per cent below normal.

This season started with the larger part of the settled areas receiving above average falls in December. Extreme December gaugings were recorded at Alawoona (74 millimetres) and Geranium (117 millimetres). However, rainfall was low in most areas in the following months.

#### Extreme Rainfalls recorded during January 1984

Station	Total (mm)	Station	Total (mm)
Granite Downs .....	346	Balcanoona .....	248
Oodnadatta .....	278	Marree .....	186

Mean summer maximum and minimum temperatures were generally within 1°C of normal. No extreme temperatures were reported in this period.

Rainstorms, on 30 and 31 December 1983, in the Cowell-Cleve area and in the Central and Eastern districts, caused some flooding and extensive crop damage in those areas. Flood rains, on 11 and 12 January 1984, in the Far North and North West districts cut the Tarcoola to Alice Springs rail-line.

Numerous minor bush fires were reported during the season. The most notable fire burned from 9-14 January at Mount Remarkable and destroyed more than 2000 hectares of bushland.

#### Autumn 1984

Autumn rainfall was below average in all districts apart from the North West, where the seasonal district average was 7 per cent above normal.

Gaugings in March varied from below normal in the north and west of the State to very much above normal in the Lower South East district. By contrast, April gaugings in the south east of the State were below average and those in the north and west were above average. May gaugings were below normal in most parts of the State.

Mean Autumn maximum and minimum temperatures were within 1°C of the seasonal average.

Gale force winds on 26 March damaged forty buildings in Central and South East districts. During the gale a wind gust of 117 kilometres per hour was recorded at Adelaide Airport.

Hail caused \$100 000 damage to parked aircraft at Strathalbyn on 25 March. Hail also damaged crops near Victor Harbor on 23 March.

Floods were reported at Victor Harbor and Mount Barker on 23 March and at Mount Gambier and Naracoorte on 25 March.

Severe storms damaged trees and buildings at Waikerie on 12 March, at Meadows on 25 March and at Murray Lagoon (Kangaroo Island) on 22 May.

### Winter 1984

Winter rainfall was above normal in all districts with the exception of Yorke Peninsula and the Far North where district averages were 8 and 22 per cent below normal respectively.

June rainfall was below average throughout most of the settled areas. However, July and August rainfalls were much above normal in most districts. Extreme July gaugings were recorded at Sutherlands (70 millimetres), Waikerie (58 millimetres) and Arkaroola (48 millimetres).

**Extreme Rainfalls recorded during August 1984**

Station	Total (mm)	Station	Total (mm)
Lobethal .....	288	Nairne .....	184
Mount Compass .....	209	Lucindale .....	164
Mount Bold .....		Frances .....	128
Reservoir .....	199	Neptune Island .....	127
Myponga .....	192	McLaren Vale .....	121
Robe .....	191	Claypans .....	66

Mean winter maximum and minimum temperatures were within 1°C of normal. During July many stations recorded their lowest ever day time temperatures.

Strong winds damaged trees and buildings in Central and South East districts on 2 July, at Elliston on 9 August and in Adelaide on 23 August.

Minor flooding was reported in the Adelaide Hills on 10 July, in the Far North district on 5 August, and Central district on 16 August.

### Spring 1984

Spring rainfall varied from more than 30 per cent below average in the Murray Mallee and Riverlands districts to more than 30 per cent above normal in the Kangaroo Island, Lower South East and Upper North districts.

September rainfall was above average in most parts of the settled areas with some extreme falls recorded in Central and South East districts, at Cape Borda (147 mm), Parndana (135 mm), Mount Gambier (113 mm), and Neptune Island (93 mm).

October rainfalls were about average over most of the State with the exception of the Central and South East districts. By contrast in November the Central and South East districts received above average falls while rainfall over most of the rest of the State was below normal. Extreme November gaugings were recorded at Mount Burr (106 mm) and Beachport (103 mm).

Mean spring maximum temperatures were up to 1.5°C below normal over most of the State. Mean seasonal minima were generally within 1°C of normal.

Three days of heavy rain resulted in flooding of many areas on Kangaroo Island on 4 September. Flooding was also reported at Millicent on 1 November.

Severe frosts damaged vines in the Riverland on 12 September. Strong winds damaged buildings in Adelaide on 3 September and Ceduna on 15 September. Lightning injured 3 people at Largs Bay beach on 18 November, and one subsequently died.

## 1.3 NATURAL RESOURCES

### MINERALS

The opal fields at Coober Pedy, Mintabie and Andamooka supply most of the world's precious opal. The estimated value of raw opal production in South Australia was \$30.6 million in 1983. Most of this is exported to Hong Kong, Japan, USA and Germany.

Iron ore is mined in the Middleback Ranges on Upper Eyre Peninsula. These Ranges lie to the west of Whyalla, a coastal port with a steelworks, and extend discontinuously from Iron Knob in the north to Iron Duke nearly 65 kilometres to the south. In excess of 160 million tonnes of ore have been mined since 1900. Production for 1983 was approximately 1.5 million tonnes.

Poor ore grades and low copper prices have forced CSR Ltd to withdraw from operating its wholly owned copper mine at Mount Gunson; the recovery of remnant ore is to be undertaken by Emeco Australia Pty Ltd. Since operations at Cattlegrid open pit started in 1974, more than 60 million tonnes of overburden and ore have been mined to recover more than 100 000 tonnes of metallic copper in concentrate. The Burra Mine, 161 kilometres north of Adelaide has ceased production but continues to treat a copper cement product imported from Peko-Wallsend's Warrego Mine in the Northern Territory. The copper oxide produced at Burra is used for the production of fertilisers, agricultural chemicals and copper sulphate.

Feasibility studies and evaluation of the Olympic Dam copper-uranium-gold-silver deposit being undertaken by the joint venturers—Western Mining Corporation and BP Australia—at Roxby Downs are proceeding on schedule. Underground developments totalling almost seven kilometres provide access from Whenan Shaft to the various ore types which have been delineated by drilling. These provide bulk samples for testing as well as sites for drilling stations underground and the opportunity for close study of mineralised blocks and enclosing rocks. The \$17 million pilot plant, with an ore feed throughput of five tonnes per hour, to yield copper concentrate and yellowcake product has been commissioned. Test smelting of a 500-tonne parcel of copper concentrates is being undertaken in Finland.

The Olympic Dam deposit, which has an area of twenty square kilometres, has been tested by 550 surface drillholes and 350 underground drillholes to indicate ore reserves of at least 2 000 million tonnes averaging 1.6 per cent copper, 0.6 kg/tonne uranium

oxide, 0.6 gm/tonne gold and 4gm/tonne silver. Detailed infill drilling has indicated a higher grade zone of probable ore reserves.

Several large coalfields have been discovered in South Australia but only the Leigh Creek coalfield operated by The Electricity Trust of South Australia is being mined. To date more than 40 million tonnes of coal has been delivered to the power stations at Port Augusta. Production was approximately 1.3 million tonnes during 1983.

Permian sub-bituminous coal has been located by drilling in the Arkaringa Basin at Lake Phillipson in the southern portion of the basin and at Arkaringa Homestead in the northern part of the basin. At Lake Phillipson a number of coal seams have been delineated in two elongated troughs with an inferred resource of 5 000 million tonnes. In the northern part of the basin Meekatharra Minerals Limited have defined four coal deposits which are collectively referred to as the Arkaringa Coalfield. To date drilling has delineated a large measured indicated resource of at least 3 000 million tonnes and a large inferred resource tonnage.

Large resources of low ranking coal (lignite) occur within the State. In the Northern St Vincent Basin Coalfield, there are five separate deposits held by The Electricity Trust of South Australia. The two principal deposits are Bowmans containing 1 250 million tonnes and Lochiel containing 585 million tonnes.

Other major lignite deposits are near Kingston (SE), held by Western Mining Corporation Ltd, and containing 985 million tonnes and at Sedan, held by CSR Ltd and containing 230 million tonnes.

Barite is obtained from several localities in the Flinders Ranges. The Oraparinna Mine is the largest producer of industrial grade barite in Australia and also produces oil drilling grade material.

The largest part of Australian reserves of gypsum are located in South Australia. The deposits have in general formed in coastal basins, the largest of these occurring at Lake MacDonnell. Other deposits are found at Streaky Bay, Lake Fowler, Cooke Plains and the Morgan-Blanchetown area.

High grade kaolin is produced from weathered shales at Birdwood and altered metasediments at Williamstown in the Mount Lofty Ranges. Sillimanite and damourite (mica) are also obtained from the open-cut at Williamstown. White burning plastic clays are mined near Adelaide at Golden Grove, One Tree Hill and McLaren Vale and clays for refractory and ceramic uses are supplied from Tregolana, Longwood and Woodside.

High quality dolomite for steel making is quarried at Ardrossan and for glass making at Tantanoola. Silica sand for glass making and foundry use is mined at Normanville.

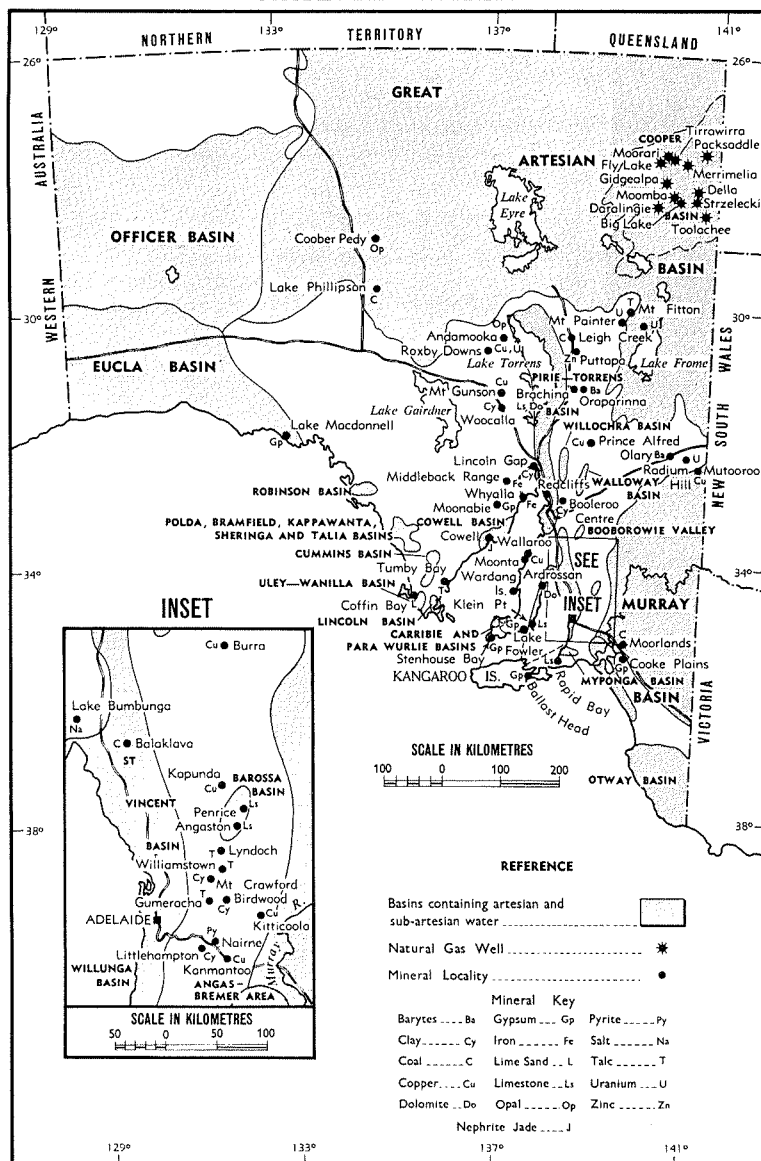
Conditions in South Australia are ideal for the production of salt from sea water by solar evaporation. Large solar salt works are located at Dry Creek (near Adelaide), Port Price (Gulf St Vincent), and Whyalla. Salt is also harvested from several saline lakes, in particular Lake Bumbunga and Lake MacDonnell.

South Australia contains many deposits of limestone and apart from quarries worked for construction purposes the main deposits are at Rapid Bay, Angaston and Klein Point for cement, Mount Gambier for whitening and building stone, and Penrice for chemicals and cement.

Magnesite is mined at Myrtle Springs north-west of Copley.

Monumental stone is produced from white marble at Angaston, black granite from Black Hill, blue granite from Kingston (SE), brown granite from Sienna, and red granite from Calca. Billiard table slate and paving stone is supplied from Mintaro and from Jones Hill in the northern Flinders Ranges. Walling and paving stone is also obtained from Willunga and Wistow.

# SOUTH AUSTRALIA MINERAL RESOURCES AND ARTESIAN WATER



Nephrite jade, which occurs as lenses north-west of Cowell, is mined for ornaments and jewellery, and is also exported in crude form. Banded calcite, used for ornamental purposes, occurs in narrow veins near Warrioota in the Flinders Ranges.

Talc is produced from Mount Fitton in the Flinders Ranges, Gumeracha, Lyndoch and Tumby Bay for use in ceramics and cosmetics.

High grade zinc ore is mined at Puttapa, twenty kilometres south of Copley as markets allow.

Significant deposits of uranium exist in the Lake Frome region.

A special article on the Minerals of South Australia was included on pages 21-39 of the *South Australian Year Book* 1975.

### PETROLEUM RESOURCES

Before the late 1940s South Australia had no satisfactory indigenous source of primary energy. A number of deposits of sub-bituminous coal including those at Leigh Creek, Moorlands, Balaklava and Lake Phillipson were known but none of these were considered worthy of development.

Industrial unrest in the late 1940s led to a growing awareness of the State's dependence on eastern States coal and foreign oil and led to the development of the Leigh Creek coalfield.

The search for petroleum was actively encouraged and assisted from the mid-1950s. This culminated in the discovery of the Gidgealpa gas field in 1963 by Santos Limited and the then Delhi Australia Petroleum Limited.

Following the discovery of a second major gas field at Moomba, a pipeline was constructed from Moomba to Adelaide and came into operation late in 1969.

Petroleum exploration activity in the early 1970s resulted in a number of new discoveries of both gas and oil. An agreement was made with the Australian Gas Light Company Limited to supply gas to the Sydney area over a twenty-five year period. Adequate reserves were demonstrated to exist by late 1972, and supply to this new market commenced in December 1976.

Renewed exploration activity has been stimulated by the relatively recent discovery of oil in the Mesozoic Eromanga Basin which overlies the Cooper Basin, particularly in the Dullingari, Merrimelia, Strzelecki, Big Lake, Gidgealpa, Wancoocha and Limestone Creek-Biala-Kobari field areas. The total reserves of Mesozoic oil so far discovered now exceed the original proven Permian oil reserves in the Cooper Basin (Tirrawarra, Fly Lake and Moorari fields). There is still a considerable potential for further Mesozoic oil discoveries both within and outside of the Permian subcrop area.

The completion in early 1983 of the 659 kilometre liquids pipeline from Moomba to storage and shipping facilities at Port Bonython has enabled the shipment to date of 1 600 000 kilolitres of crude oil, 500 000 kilolitres of condensate and 140 000 metric tons of LPG (propane and butane). The amount of exploration and appraisal drilling aimed at identifying additional liquids reserves in the Cooper and Eromanga basins has remained at a high level, with an average of four rigs involved in this exercise during the past year. The search for natural gas has also been intensively maintained, with up to seven rigs at various times utilised for this purpose in the Cooper Basin area. In September 1984 the Cooper Basin partners announced that sufficient gas reserves had been proven to enable them to guarantee to meet the contract to supply gas to New South Wales until the year 2006. Current published proven and probable hydrocarbon reserves for South Australia are 78.4 billion ( $10^9$ ) cubic metres of sales gas, 116 million barrels of ethane (potential petrochemical feedstock), 46 million barrels of crude oil, 41 million barrels of condensate and 78 million barrels of LPG (1 barrel = 159 litres).



Outside the main producing area of the Cooper Basin onshore and offshore petroleum exploration is proceeding with twelve onshore licences and three offshore permits in force, and companies have committed to spend approximately \$112 million in the State over the coming year. During the past year \$82 million was spent on exploration, principally onshore, but included the drilling of South Australia's deepest petroleum well, Breaksea Reef 1, to a depth of 4 470 metres at an offshore location in the south-east of the State. In 1985 offshore exploration will be concentrated in the Otway and Duntroon basins, while onshore activity will take place in the Cooper, Otway, Officer, Pedirka and southern Eromanga basins.

### UNDERGROUND WATER

South Australia is the driest of the Australian States with more than 82 per cent of its area receiving an average annual rainfall of less than 250 mm. The wettest parts of the State are the south and south-eastern coastal areas and the Mount Lofty-Flinders Ranges. Only small areas of the Mount Lofty Ranges, Kangaroo Island and the lower South East receive more than 600 mm per year. As a consequence of the rainfall pattern, South Australia is notably deficient in rivers. The River Murray, the only large permanent river, originates outside the State. The few streams commencing in the ranges are short and seasonal in flow. In this situation groundwater is of considerable importance and it is estimated that at least 120 000 wells have been drilled or dug in the search for water.

Annual groundwater use in South Australia is estimated to be 316 500 megalitres which is approximately 32 per cent of total water use. The greatest use of groundwater is for irrigation which accounts for an estimated 227 000 megalitres per year. In 1980-81 groundwater use, on an area basis, was 48 per cent of the total water used for irrigation and was increasing. Principal areas of use are the South East, including the Angas-Bremer irrigation area near Langhorne Creek, the Adelaide Plains and the Mount Lofty Ranges. Stock and industry account for an estimated 70 000 megalitres per year, which includes approximately 36 000 megalitres flowing from artesian wells in the Great Artesian Basin. The latter quantity is being progressively reduced as artesian wells are either plugged and abandoned or rehabilitated and the flow controlled. At December 1984 approximately 60 flowing wells remain to be controlled.

Most public water supplies in South Australia originate from reservoirs in the Mount Lofty and Flinders Ranges and on Eyre Peninsula and from the River Murray. These sources provide an estimated 92 per cent of reticulated supplies with groundwater supplying the remaining 8 per cent, or approximately 20 000 megalitres per year.

Approximately fifty towns and districts are fully or partly dependent on groundwater for public water supplies. The two main areas of use are the South East and Eyre Peninsula which together account for approximately 93 per cent of groundwater used for public water supplies.

Although saline groundwater occurs over much of the western part of the State there are a number of large sedimentary basins where low salinity groundwater is available. These include the Great Artesian Basin, Murray and Otway Basins and St Vincent Basin. In addition there are a number of smaller basins which are important sources of groundwater for irrigation, town water supplies or stock, for example the Barossa Valley and Myponga Valley.

Artesian flows occur in some of these basins but the largest flows are from the Great Artesian and Otway Basins. The Great Artesian Basin has a total area of 1 700 000 square kilometres of which 310 000 square kilometres are in South Australia, covering 30 per cent of the State. The main intake area for the principal aquifer lies along the western

margin of the Great Dividing Range in New South Wales and Queensland. Minor intake also occurs along the western margin of the basin in South Australia. Natural outlets for the basin are the mound springs west and south of Lake Eyre. Total discharge from the springs is estimated to be 30 000 megalitres per year. Deep wells are necessary to tap the artesian aquifer, and individual wells may yield 4 500 kilolitres per day or more. The water is generally unsuitable for irrigation because of its chemical composition and it is used mainly for the watering of stock, with town water supplies being a minor use.

The Murray Basin has a total area of 278 000 square kilometres, mainly in Victoria and New South Wales, the area in South Australia being 73 000 square kilometres. The southern and central portions of the basin contain relatively low salinity groundwater suitable for most purposes. Salinity increases steadily in a northern and north-westerly direction and the groundwater becomes unusable in the vicinity of the River Murray. In the Pinnaroo area increasingly larger quantities are being withdrawn for centre point irrigation systems. A large area of the Mallee and the Keith-Bordertown area are now Proclaimed Regions under the Water Resources Act, which provides for controls on the use of ground water. Very large yields can often be developed from cavernous limestone aquifers occurring at relatively shallow depth and in some places from sand dunes and other local aquifers. Towns in the central part of the basin are supplied with groundwater, which is also extensively developed for stock supplies and for irrigation. Towns along the western margin, as far south as Keith, are provided with water by pipeline from the River Murray. At Padthaway, an area marginal to the Murray Basin, where groundwater occurs at shallow depth, withdrawal for irrigation is approximately 24 000 megalitres per year. The area is now a Proclaimed Region under the Water Resources Act, 1976-1981. Withdrawal of ground water is subject to the holding of a licence, which limits the quantity that may be pumped. For the Angas-Bremer Irrigation Area near Lake Alexandrina estimated withdrawal is 20 000 megalitres per year and it is also a Proclaimed Region.

The Otway Basin in South Australia lies south of Kingston and extends along the southern coast of Victoria. Large supplies of low salinity groundwater are available from the Gambier Limestone aquifer over much of the basin. A deeper confined aquifer provides artesian supplies in the Kingston-Beachport area, the water being used mainly for flood irrigation of pasture, and for town water supplies.

The Eucla Basin, occurring in the south-western part of the State, has an area of 41 000 square kilometres in South Australia, but the greater part (135 000 square kilometres) lies in Western Australia. Little use is made of groundwater from the basin because of its high salinity, but water suitable for stock is available from the limestone aquifer in some areas, particularly near the head of the Great Australian Bight.

The Adelaide Plains Sub-Basin is part of the St Vincent Basin, extending 160 kilometres north of Adelaide, on the western side of the Mount Lofty Ranges. Good quality groundwater is obtainable in certain parts of the plains and it is extensively used for the irrigation of market gardens in the Northern Adelaide Plains. Pumping in this area has greatly exceeded the groundwater recharge rate for a number of years. It was the first Proclaimed Region under the Water Resources Act, 1976-1981 and the use of groundwater is subject to controls by a licensing system and the metering of wells.

In the Adelaide Metropolitan area the reticulated water supply has been augmented by groundwater on a number of occasions since 1915, the last time in 1967-68 when 9 500 megalitres were pumped over a seven month period.

Other small basins within or adjacent to the St Vincent Basin include Willunga and Noarlunga embayments and Myponga and Hindmarsh Tiers areas. In all these areas groundwater is used for stock and increasingly for irrigation.

The Pirie-Torrens Basin extends from Port Broughton to the northern end of Lake Torrens. Groundwater from the basin is used mainly for stock except in the Nelshaby-Napperby area east of Port Pirie where it is suitable for the irrigation of market gardens.

The Willochra and Walloway Basins located near Quorn and Orroroo respectively, also provide mainly stock water supplies. However, there is limited irrigation of pastures in both basins. In the Barossa Valley groundwater generally has a low salinity and it is being used increasingly for irrigation of vines.

There are several important groundwater basins on Eyre Peninsula including Lincoln, Uley-Wanilla, Uley South and Poldas Basins. They provide more than half the water for the reticulation system covering much of Eyre Peninsula. The fractured rocks of the Mount Lofty Ranges contain significant groundwater resources which are used for irrigation in several areas *e.g.* Piccadilly Valley.

The exploration and testing of the groundwater resources of the State is a continuing responsibility of the South Australian Department of Mines and Energy, which provides the services of geologists and an extensive drilling organisation. Pamphlets on the groundwater occurrences throughout the State, particularly those in the more important basins are published by the Department.

The Water Resources Act, 1976-1981, covers all water resources in the State and is administered mainly by the Engineering and Water Supply Department. That part dealing with the activities of drillers is delegated to the Department of Mines and Energy and includes control of drilling to prevent waste or pollution of groundwater.

The Underground Waters Technical Advisory Committee, a body made up of officers from the Engineering and Water Supply and Mines and Energy Departments, was formed in 1981 to advise and assist mining and exploration companies which have projects involving water supply, dewatering, waste disposal and other environmentally sensitive aspects of groundwater.

## SOILS

### General

There are many kinds of soils in South Australia ranging from free-flowing sands such as the coastal dunes, to the shrinking and swelling clays of which good examples are found near Bordertown and Tanunda, while some show a marked textural contrast with depth, such as the sand over clay soils of the South East. Not only do these soils differ in their visible attributes, such as their colour, texture, stoniness and degree of slope, but also in the properties, largely unseen, of their chemistry, their relations to air and water, and to the micro-organisms which form the soil flora and fauna.

Undoubtedly the most widespread deficiency is phosphorus—low phosphorus contents are typical of South Australian soils. The gravelly ironstone soils of Kangaroo Island and parts of the Adelaide Hills are among the most impoverished in the world, containing only between 5 and 40 parts per million of phosphorus in their surface soils, whereas the red-brown earths in their natural state contain 200 to 300 parts per million. These figures do not compare favourably with those for the soils of Great Britain, in which 600 parts per million of phosphorus is common. However, soils are changed by the treatment they receive and the phosphorus content of soils in some areas has been so built up over the years that its residual effect is now sufficient to produce a good cereal crop without the further addition of superphosphate.

On the other hand, prolonged clean cultivation in vineyards and frequent cropping in wheatland areas causes deterioration of the structure of surface soils and depletion of

nitrogen. The latter deficiency can be remedied by the proper use of legumes, such as medics and clovers, during the pasture phase of the crop rotation in wheatlands. Nitrogen is one of the most mobile of the nutrient elements in soil and is highly susceptible to differences in management.

Some soils which seem to be unique to Australia, such as the mallee soils or calcareous earths, are well represented in this State. The irrigated horticultural settlements established on these soils along the River Murray have been notably successful, but where dry land arable farming is practised these soils are susceptible to wind erosion.

There are other important features that affect plant growth, such as acidity and alkalinity, supply of trace elements and so on. Information about these and their importance in different localities can be obtained from the South Australian Department of Agriculture and in a bulletin published by the Department entitled *Soils of South Australia's Farm Lands*. The extent of country covered by the different soil groups is illustrated by the *Atlas of Australian Soils* which is being compiled by the Division of Soils, Commonwealth Scientific and Industrial Research Organization (CSIRO). The first sheet of this Atlas, published in 1960, includes the areas of higher rainfall country in South Australia and refers to the many soil surveys made in this State.

A special article on the Soils of South Australia was included on pages 21-31 of the *South Australian Year Book* 1969.

### Building Soils

The soils of Adelaide and environs have varying engineering properties and provide varying foundation conditions for buildings. They may be classified as follows:

- (a) expansive clay soils which show changes in volume with changes in moisture content; these soils are often commonly known as 'Bay of Biscay' soils;
- (b) collapsing soils which, when wetted beyond a certain limit, lose strength and are liable to settle suddenly, even under their own weight; they are usually fine limey silts of windblown origin;
- (c) compressible soils, occurring chiefly on the coastal river estuaries, are associated with high water tables and restricted surface drainage; these soils are unable to carry building loads without long-term settlement;
- (d) stable soils, which include alluvial sands and gravel, and most weathered rocks.

Different types of house footing have been designed or adapted to cope with these problem soils, and further details are given in the pamphlet entitled *Soil Tests and House Foundations in Adelaide*, published by the Department of Mines and Energy.

## 1.4 FLORA AND FAUNA

### FLORA

A broad division of vegetation types is formed by Goyder's Line which represents approximately the 250 millimetre annual isohyet. To the north of the Line, in the Eremaean Province, lies about 80 per cent of the State, experiencing arid to desert conditions where short, erratic growing seasons prevail. Areas to the south, in the temperate region, have climates with an equable seasonal cycle of winter rainfall and summer drought.

### Eremaean Areas

These vast areas of inland South Australia are not well known botanically. Vegetation

ranges structurally from low layered woodland, through shrub savannah, to exceedingly sparse vegetation of very low stature (shrub steppe). As in arid situations elsewhere throughout the world, therophytes are well represented and after rain these may transform the scene with prolific but transient herbage. The woody perennial vegetation is of genera adapted to the dry conditions. Predominant trees and shrubs are frequently species of *Acacia* (mulga, myall, ironwood) *Cassia*, *Grevillea* etc. but other genera (*Hakea*, *Myoporum*, *Casuarina*, and less frequently *Eucalyptus*) are often found. Some species such as the desert oak achieve a stature comparable with large temperate zone trees. Chenopod shrubs (bluebush, saltbush) are often prominent in the shrub stratum, and *Triodia* (porcupine grass) is the herbaceous cover, but there is considerable diversity in the Eremaean flora. The development of cattle and sheep grazing industries and overstocking for long periods, especially in times of drought, has led to the depletion of, and alteration to, much of the vegetation of this area.

### Temperate Areas

In general, vegetation characteristics of the temperate zone of South Australia succeed each other in a fairly predictable sequence from the highest to the lowest rainfalls. Under the high and intermediate rainfalls (about 750-1 000 millimetres) dry sclerophyll forest is well developed, particularly in the Mount Lofty Ranges, where it constitutes a western outlier of the dry sclerophyll forest system occurring in eastern Australia. *Eucalyptus obliqua* and *Eucalyptus baxteri* predominate, but other species such as *Eucalyptus rubida* (candlebark) are sometimes prominent. Such forest is replete with lesser trees such as *Acacia melanoxylon* (blackwood) at a lower canopy level and a rich array of sclerophyllous shrubs and sub-shrubs beneath. Most species have generic analogues in equivalent dry sclerophyll forests of both eastern and western Australia. Sclerophyll forest in South Australia has been cut over extensively and is being invaded by introduced plants. Lower rainfall areas down to about 400 millimetres per annum support mainly savannah woodlands and layered woodlands with South Australian blue gum (*Eucalyptus leucoxylon*) and peppermint gum (*Eucalyptus odorata*) as predominant trees. Associated trees include river red gum (*Eucalyptus camaldulensis*) especially along river and creek frontages, she-oak (*Casuarina* spp.), and manna gum (*Eucalyptus viminalis*). In these vegetations the grass stratum is expressed and the shrub stratum rather suppressed. These vegetations are now almost entirely replaced by agricultural areas.

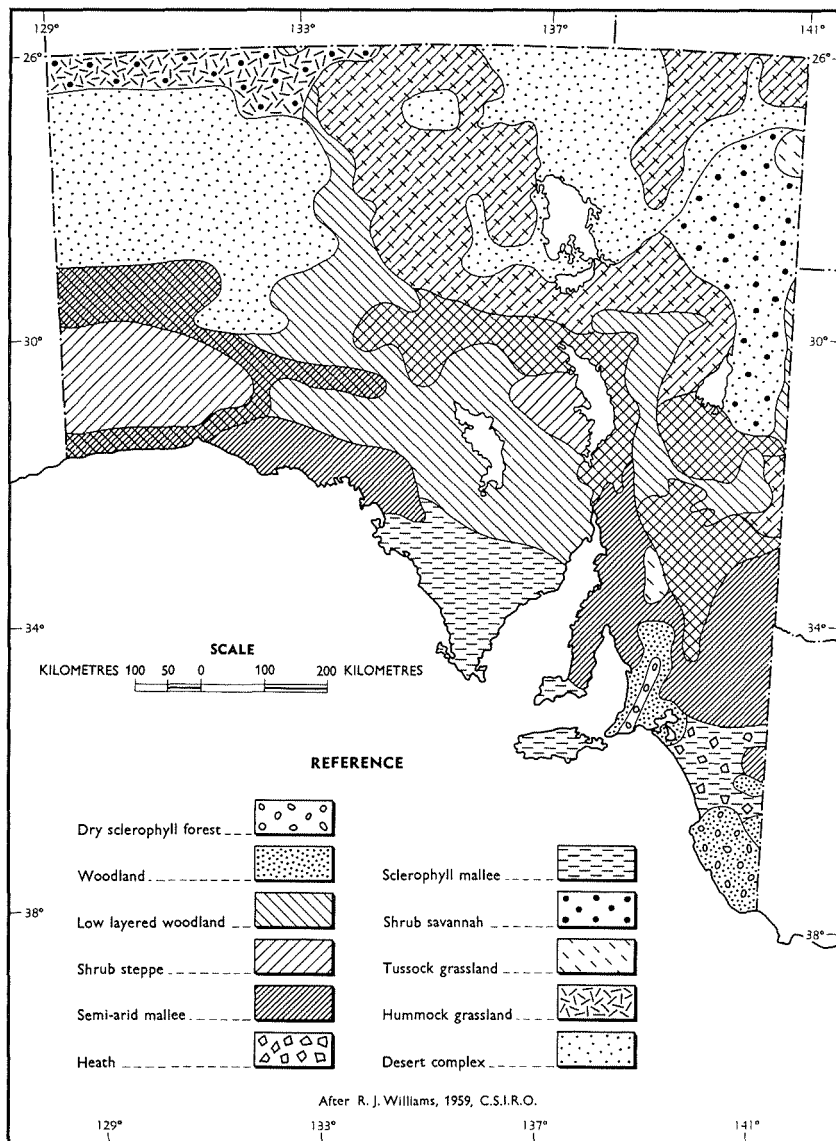
In some places on the lower rainfall extreme of the temperate zone, variant vegetations occurred. These included substantial conifer (*Callitris* spp.) and conifer-eucalypt forests and woodlands (particularly in the Flinders Ranges), and areas of pure savannah, as once occurred about Burra.

The simple division of the State into Eremaean and temperate areas needs qualifying on two counts:

(i) *Heath*. Certain higher rainfall temperate areas do not support the expected vegetation as a consequence of limiting soil fertility. The Coonalpyn Downs area is an example. Here low nutrient dune fields are superimposed on the landscape and support only a heath vegetation where the rainfall regime is suitable for woodland. Such 'light land' is the scene of contemporary agricultural expansion;

(ii) *Mallee*. Intercalated between the Eremaean and temperate systems proper, there is developed in South Australia extensive mallee vegetation, dominated by eucalyptus, the various stems of which all rise from underground lignotubers. The term 'mallee' refers both to eucalypt species exhibiting this growth habit, and to vegetation dominated by such species. Mallee vegetation is associated in its temperate reaches with heath, and in its Eremaean extensions with various vegetation types.

# SOUTH AUSTRALIA VEGETATION MAP



A more detailed description of the vegetation was included on pages 26-37 of the *South Australian Year Book* 1967 and should be referred to for a description of the plant species included in the vegetation formations shown in the map on page 30 of this issue.

## FAUNA

South Australia, centrally situated and sharing borders with every other mainland State, is in a sense the zoological crossroads of the continent. A number of typically western, eastern, and northern species extend to some point within the State, which has few species that are uniquely South Australian.

Only 8.3 per cent of South Australia—a fragmented, southern fringe—is favoured with an annual rainfall of 400 or more millimetres; more than 80 per cent receives 250 millimetres or less. The moister areas are restricted mainly to three peninsulas, to Kangaroo Island and the extreme south-east and these are divided by gulfs, straits, and stretches of drier country. Further north, the semi-arid to arid zone is deeply cut into and split by Spencer Gulf and the central highlands. Because of this geographical background the distribution of South Australian fauna, notably of birds and reptiles, is very complex.

Highly developed agriculture in the limited favourable areas and the wide-spread pastoral occupation beyond have depleted the fauna, particularly the mammals. A series of national parks and reserves is being established which will preserve samples of the various habitat types and, it is hoped, their indigenous fauna. The National Parks and Wildlife Service controls over 45 000 square kilometres (see Part 6.4), including Flinders Chase National Park (736 square kilometres) on Kangaroo Island which is free from the introduced fox.

The land mammals of South Australia at the time of European settlement numbered about 90 species—some 38 per cent of the total Australian mammal fauna. The two monotremes have survived; the spiny ant-eater is wide-spread but nowhere common, while the platypus (once found in the River Onkaparinga as well as in the River Murray) is extremely rare except where it has been introduced in Flinders Chase. The marsupials have been affected most severely; more than a quarter of the 50 or so species are now extinct in South Australia although a number of these survive beyond the State. Originally the marsupial fauna was relatively rich with some 45 per cent of the total number of Australian species represented.

Marsupials that are still common are the brushtailed possum (*Trichosurus vulpecula*) and the western grey kangaroo (*Macropus fuliginosus*). In the dry interior the red kangaroo (*Megaleia rufa*) at times greatly increases in number, probably because of changes caused by livestock grazing and the provision of extra water. Today South Australia is almost the sole custodian of the hairy-nosed wombat (*Lasiorhinus latifrons*) which is still numerous in the far west of the State, but elsewhere the species has been reduced to a few small isolated colonies.

Of the native placental mammals possibly one of the 15 or so species of bats and three or four of the 18 rodents have become extinct.

A special article on the mammals of South Australia was included on pages 42-9 of the *South Australian Year Book* 1970.

About 400 of the 700 species of Australian birds have been recorded in the State, a number that includes 40 or more vagrants and non-breeding visitors. Many species have declined greatly since settlement but probably not more than two have become extinct. The diminutive Kangaroo Island emu disappeared soon after the European settlement and the night or spinifex parrot (*Geopsittacus occidentalis*) is almost extinct in South Australia.

Many species of birds can be observed close to Adelaide in the Mount Lofty Ranges and on Kangaroo Island. Mallee areas with their lower rainfall are moderately rich in bird life although the removal of native flora has caused the disappearance of many in certain districts. Within the State may be found the boundaries between numerous western and eastern species and sub-species of birds.

A special article on the birds of South Australia was included on pages 28-40 of the *South Australian Year Book* 1972.

Well over 100 species of reptiles have been recorded. Of the few that are peculiar to the State, the white dragon lizard (*Amphibolurus maculosus*) found on the salt-encrusted margins of Lake Eyre and other inland playas is of particular interest. Undescribed species of lizards are known to occur in the Flinders Ranges. A special article on the reptiles of South Australia was included on pages 32-42 of the *South Australian Year Book* 1973.

The nineteen species of frogs include one that is restricted to the State. This number is only 16 per cent of the Australian frog fauna (123 species) and reflects, in large degree, the predominantly arid nature of the State.

Marine and freshwater fishes number about 390 species—not a very rich fauna for a State with a coastline of nearly 4 000 kilometres. There is, however, an abundance of certain species of economic importance. A special article on the freshwater fish of South Australia was included on pages 27-34 of the *South Australian Year Book* 1971.

The insects of the coastal regions show affinities with those of similar regions to the east and west, while many of the restricted number of species of the inland extend widely through arid Australia.

Among insect groups that are prominent elsewhere in Australia but are scarce in this State are butterflies and cicadas, while insects that depend on permanent streams or swamps, such as dragonflies and caddisflies, are rather poorly represented. Similarly, few species of freshwater crustaceans occur. In eastern and western Australia hosts of wasps, native bees, jewel beetles and other insects are attracted to the flowers of native shrubs in spring and summer. These insects are less numerous in South Australia largely because of the nature and limited extent of the bushland.

Among the restricted range of insects of the arid interior are a number of interesting forms. Of these certain desert-adapted grasshoppers (*Acridiidae*) are notable. Other groups with specialised species are lacewings (*Neuroptera*) and beetles and moths. Some are never abundant but the populations of others may fluctuate enormously. Moths can prolong the pupal stage to survive dry periods and may emerge in great numbers after heavy rain.

A special article on the insects of South Australian homes and gardens was included on pages 32-42 of the *South Australian Year Book* 1976.

## SNAKES IN SOUTH AUSTRALIA: A SPECIES LIST AND OVERVIEW\*

### Introduction

Universally, snakes evoke both fear and fascination in people. It was a serpent that tempted Eve in the Garden of Eden, a giant constrictor that attacked King Kong (and lost!) and a cobra that threatened Indiana Jones in *Raiders of the Lost Ark*. Whenever something sinister is required, snakes usually fit the bill. Reasons for snake phobias abound, but knowing how much of that fear is inherent and how much is learned, is a problem for psychologists who continue to debate the issue.

In Australia there is a good reason to fear snakes for among ours are some of the most

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\* Contributed by Terry D. Schwaner, South Australian Museum.



venomous creatures on earth. Fortunately, antidotes to individual venoms of the most toxic species have been developed and one antiserum has been raised to several of the more common venoms for cases in which the offending species cannot be identified. In fact, identification of these snakes is a major problem, not only to people who are bitten by them, but also to those snake 'experts' whose job it is to name them.

This article lists the scientific names of species of snakes known from South Australia, based on voucher specimens in the South Australian Museum. The names follow Cogger, Cameron and Cogger's (1984) checklist, with exceptions as indicated. It should be pointed out that new species of snakes are being described annually in Australia, both from discovery during field surveys in remote areas, and from reassessments of previously described forms.

More importantly, none of the twenty-five recognised genera of Australia's venomous, terrestrial snakes (the Elapidae) has remained unaltered taxonomically in the past two and a half decades. For an excellent summary of this problem readers should consult Mengden (1983). Very recent studies have sought to stabilise this problem by comparing new data from biochemistry, ecology, reproductive biology, and the fossil record, in addition to new analyses of snake morphology (see Grigg, *et al.*, 1985). These studies foreshadow a critical taxonomic review of all Australian snakes — one that, hopefully, will recognise that species in Australia are dynamic, rapidly evolving groups, whose taxonomy depends on a deeper understanding of their relationships, even to the level of individual populations.

South Australia is an important area for this research. The Herpetology Section of the South Australian Museum is pioneering curatorial methods to provide new materials for these studies (Schwaner 1982). The Museum's Evolutionary Biology Unit, the only facility of its kind in any Australian museum, routinely performs biochemical analyses on these materials. Studies of live animals in the field and in the laboratory are supplementing work with museum specimens, so that in some cases intensive taxonomic work need not disturb natural populations through collecting. These efforts have been rewarded locally, nationally and internationally by grants amounting to several thousands of dollars over the past four years and by the co-operation and collaboration of many interested people.

### Classification

Australian snakes are grouped into six families: the blind snakes, Typhlopidae; the pythons, Boidae; the file snakes, Acrochordidae; the colubrid snakes, Colubridae; the elapid snakes, Elapidae; the sea-snakes, Hydrophiidae; and the sea kraits, Laticaudidae. Only three of the families (Typhlopidae, Boidae, and Elapidae) are represented in South Australia. Reports continue of sea snakes being sighted in coastal waters, particularly on Kangaroo Island. However, no voucher specimens have been taken and available evidence suggests that these sightings are eels or terrestrial snakes which have intentionally or accidentally entered the sea. Thus, it is doubtful that the tropical sea snakes have ventured so far into South Australian waters (see Houston 1973).

Presently, thirty-seven species of snakes are known from South Australia. At least six additional species (five typhlopids and one elapid) may extend into the State.

### The Blind Snakes, Family Typhlopidae

These small, burrowing snakes are non-venomous and completely harmless. Individuals are usually found in sandy soil and surface litter, or hidden in rotten logs or termite nests. They are nocturnal and only occasionally are seen above ground in the early evening, particularly on warm nights. Probably the largest accumulation of worm snakes

observed was in the stomachs of feral cats taken at night near Roxby Downs. Apparently the cats caught the snakes as they emerged from sandy ridges earlier in the evening.

The eyes of blind snakes are reduced to minute size, presumably as an adaption to burrowing. Their prey consists of ants and termites which are located by the smell-taste function of the snake's forked tongue. The tongue picks up chemicals from the air and surfaces. When the forks are inserted into holes in the snake's palate, sensory receptors (like those in our noses and on our tongues) analyse the scents to inform the snake of potential prey. In snakes, the recognition of prey by taste-smell is innate for some prey, but scents of other prey must be 'learned'.

Burrowing snakes are specially adapted. In addition to reduced eyes, the bones of the skull are fused (less 'kinetic' than in terrestrial snakes), the snout is modified into a shield and the tail has a pointed spine used to anchor the snake when it burrows. The muscles of burrowing snakes are peculiar; the anterior body wall has enlarged 'red' muscle, whilst in the posterior portions the muscles are smaller and pinkish or whitish. Movement of these snakes in burrows is termed 'freight train' locomotion because the anterior red muscles literally pull the rest of the body through the soil!

In South Australia, *Ramphotyphlops australis* and *R. bituberculatus* are found State-wide. *R. endoterous* is limited to inland deserts. *R. pinguis* and *R. unguirostris* are restricted to the extreme southeast of the State where five other species of *Ramphotyphlops* (*broomi*, *linguis*, *nigrescens*, *proximus* and *wiedii*) may also occur.

Little more is known about Australia's blind snakes than was summarised by Edgar Waite in 1918. Relationships among species have been obscured by lack of external characteristics that might distinguish groups and insufficient numbers of specimens from critical areas. A fossil record for blind snakes in Australia is non-existent, and any attempt to identify fossil remains would be hampered by a lack of prepared skeletons for comparisons. Blind snakes probably are not rare, but they are secretive and difficult to find. Thus, further work must depend on the slow accumulation of specimens (particularly live individuals) and the use of new taxonomic methods to detect additional characteristics for study.

### Pythons, Family Boidae

Three species of pythons are represented in South Australia. All are non-venomous snakes that kill their prey by constriction. Prey are seized in the snakes' jaws, wrapped with coils and slowly squeezed until they can no longer breathe. Death, therefore, comes by asphyxiation, not crushing. Pythons are not dangerous (unless they are very large), but they can inflict painful bites. Fortunately, South Australian species can be handled safely and become gentle in captivity. Keeping native pythons, however, requires special permits from the National Parks and Wildlife Service because they are considered possibly rare species requiring special protection.

All pythons lay eggs. Captive breeding programs have been successful and have the potential of reducing the need to take pythons from the wild for display or other educational purposes. The South Australian Museum now refrains from taking pythons, except from areas where voucher specimens representing considerable range extensions for the species are lacking.

The woma, *Aspidites ramsayi* is a large, heavy-bodied snake (to 2.4 metres in total length) found in desert regions, usually near sandhills. Normally it feeds on lizards and other snakes, but the introduction of rabbits has provided the woma with both an alternative food and a refuge in rabbit warrens in many areas of the State.

The children's python, *Liasis childreni* is a small snake (less than 1 metre in total length) known from rocky areas in hilly and mountainous regions of South Australia, as

well as from along inland water courses. Although it feeds on lizards, small mammals and birds, little more is known of its natural history.

The carpet snake, *Morelia spilota*, is another large python (to 2.5 metres) inhabiting the cliff banks of the River Murray, the rocky areas of the Flinders Ranges, and other mountainous regions of the Eyre Peninsula and far north. Isolated populations are on St Francis Island and the adjacent coastal mainland, and at Goyders Lagoon in the far northeast of the State. Carpet pythons eat lizards, small mammals and birds. Variation in colour and pattern has led to the description of several subspecies. West coast populations can be regarded as *Morelia spilota imbricata*; other forms in South Australia belong to *M. s. variegata* (M. Francis and C. Harvey, personal communication).

### Elapid Snakes, Family Elapidae

The venomous, and most common, terrestrial snakes of Australia are the elapids. Twenty-nine species occur in South Australia, only twelve of which may be considered dangerous to people. These include the death adders, the copperheads, the tiger snake, the inland taipan, the red-bellied black snake and the king brown or mulga snake, and the brown snakes. Large specimens of the myall snake, *Suta suta*, may be dangerous, but how serious is not known.

Elapids have hollow fangs fixed in the anterior of their upper jaws, through which venom is injected from large glands behind the eyes. Although snakebite from elapids is potentially fatal, bites are rare. In about half of the treated bites no venom is injected (Dr J. White, pers. comm.). Most of these snakes are shy and quickly retreat when approached. In almost all cases, reasonable precautions, when walking or climbing in the bush, or during seasons when snakes are most active, prevent snakebite. Nevertheless, first aid treatment should be known by all Australians (see Sutherland 1982).

A number of useful and informative books on elapid snakes of Australia has become available in the past few years, and these are listed below. There is, therefore, little reason to reiterate aspects of the natural history of these snakes. The following discussion concerns new information gathered from recent studies, to supplement what has been reported previously.

### Death Adders

These are unusual elapids because they resemble vipers (family Viperidae) in body proportions and behaviour. As 'ambush' predators they lie hidden in loose sand or litter and 'lure' potential prey (lizards and small mammals) by wriggling a worm-like tail.

In South Australia the desert death adder, *Acanthophis pyrrhus*, is known from two specimens, one from Ooldea and the other from the Everard Ranges. Attempts to confirm the Ooldea locality have been unsuccessful (P. Mirtschin, pers. comm.). This is one of many examples where a reptile species is believed to inhabit large areas of the State (see Cogger 1984) but is, in fact, represented in collections by single specimens from very limited and remote areas. Consequently, any discussion on the status of these species in South Australia is pure speculation.

The common death adder, *A. antarcticus*, is a habitat specialist, known to occur in undisturbed, vegetated dunes near coastal areas and mallee habitats across the southern parts of the State. Extensive clearing of mallee and development of coastal land may have caused a decline in death adder populations (Mirtschin 1984). This is a reasonable assumption but numbers of death adders in the remaining areas have not been determined or compared with populations in large tracts of native bush. Also, Mirtschin's remarkable success at breeding death adders in captivity does indicate that the species could be reintroduced into suitable habitats. However, such research should not be seen

as a remedy to re-establishment of populations in reclaimed bushland because ecological factors that control death adder populations in native habitats are still unknown.

### *Copperheads*

In South Australia, the eastern copperhead, *Austrelaps superbus*, is a medium to large-sized snake (to 1.5 metres in total length) restricted to freshwater catchments in the extreme southeast. A smaller, undescribed species of copperhead inhabits Kangaroo Island and the Mount Lofty Ranges. The larger species eats mostly frogs, while the smaller form takes lizards and, on Kangaroo Island, juvenile mice. Formal description of the new species is complicated by the possibility that it was previously described and then placed with *A. superbus*. Workers at the South Australian Museum are collaborating with others in Victoria to resolve this dilemma and formally recognise the species, which is endemic to South Australia.

### *Tiger Snakes*

Twenty thousand years ago tiger snakes formed a continuous series of populations from Queensland to Perth, along the continental shelf of southern Australia. Subsequently, sea levels have risen 100 metres, flooding the lowlands of the continental shelf and fragmenting the range of tiger snakes into isolated populations on offshore islands, peninsulas, and along upland rivers. In the time since isolation, snakes on some islands have become 'giants' or 'dwarfs', presumably in response to differences in the prey types which were isolated with them (Schwaner 1985). By comparison with organisms on other island groups formed at the same time by rising sea levels, the rates of change of tiger snakes are, evolutionarily, staggering! These populations may well be unique in their contribution to an understanding of how species form.

Fortunately, most offshore islands of South Australia are reserves where flora and fauna are protected. However, mainland populations of tiger snakes along the lower Broughton River, the Mount Remarkable area, and the Onkaparinga River are barely existing and may become extinct. These populations are key pieces in a zoogeographic puzzle that predicts the former distribution of these snakes along river valleys which are now Spencer Gulf and Gulf St Vincent. As long as environmental policies are based on threatened species as a whole, and not on threatened populations, these vital elements may be lost.

### *Brown Snakes*

No other group of Australian snakes is as difficult to understand, taxonomically, as the brown snakes, genus *Pseudonaja*. In South Australia the common or eastern brown snake, *P. textilis*, ranges north to the southern edge of the River Murray, and west to the area between Port Pirie and Port Augusta. Individuals also have been taken at Goyders Lagoon in the far northeast of the State, but this population is not connected with those in the south of the State and probably represents populations extending down the Diamantina River from Queensland. Two isolated populations of *P. textilis*, on the southern tips of Yorke and Eyre peninsulas respectively, have been called a subspecies, *P. t. inframacula*. The dugite, *P. affinis*, extends from Western Australia across the Nullarbor region, along the coast to the southern tip of Eyre Peninsula. Elsewhere, the western brown snake or 'gwardar', *P. nuchalis*, presents a bewildering array of colours and patterns which vary (1) between geographic localities, (2) between individuals in the same areas, and (3) within individuals as they mature or experience different seasons. Recent studies of the chromosomes of these snakes recognised potentially five species within the western brown snake complex (G. Mengden, pers. comm.). The challenge for taxonomists will be to match the chromosomal differences with differences in external body features so that these species can be distinguished, described and classified. In

South Australia, *P. guttata*, is known from a single specimen taken from the stomach of a *Suta suta* at Goyders Lagoon (Miller and Schwaner 1982).

### *The Inland Taipan*

This is the world's most venomous terrestrial snake. By comparison, the venom of the inland taipan, *Oxyuranus microlepidotus*, is fifty times as potent as that of a cobra, eleven times that of a tiger snake, and over six times that of its nearest relative, the common taipan, *O. scutellatus* (Broad *et al.* 1979). In spite of its reputation, the inland taipan is restricted to the extreme north east of South Australia and is rarely encountered. The antiserum to common taipan venom neutralises that of the inland taipan, although more of it needs to be administered.

### *The Small, Harmless Elapids*

All elapid snakes have front fixed-fangs and venom glands. Some of the smaller species, however, have weak venom, very small amounts of venom, very short fangs, a reluctance to bite when handled, or a combination of these traits. For these reasons they are not dangerous and, perhaps consequently, have not received much publicity. This is unfortunate because they are among the most colourful and interesting forms of Australian reptiles.

Most of the natural history of these snakes comes from the dissection of museum specimens by Richard Shine at the University of Sydney. His examination of stomach contents and reproductive organs, as well as measurements of sizes and shapes, has given insight into their habits and peculiarities. For example, the black and white-ringed bandy-bandy, *Vermicella annulata*, feeds exclusively on blind-snakes, sometimes taking prey as large as its own body!

Some small elapids (as well as some larger species) immobilise their prey both by injecting venom and by constriction (*see* Shine and Schwaner 1985). The importance of this observation is that constriction, as a method of subduing prey, must have evolved separately many times in snakes, rather than being inherited from some primitive group, such as the boids. Why do a large number of elapids use both constriction and venom to subdue prey? One suggestion is that the venom of some small species is too weak—how venom affects natural prey is unknown for most species. Another is that the short fangs of elapids cannot readily penetrate the 'armour' of some lizard prey so that constriction allows time to find a 'weak spot'. Finally, even if the venom is injected, it may not act fast enough to prevent the prey from biting or otherwise injuring the snake.

All of these explanations hint that Australian elapids might not be as 'adapted' to their prey sources as snakes in other parts of the world where extreme specialisations for feeding are exhibited. Until recently these notions were discounted. Conventional wisdom asserted that elapids in Australia were 'old, declining groups' and, in spite of the absence of any fossil record, maintained that these snakes had been around for some 30-35 million years.

This premise has been questioned by recent studies using immunological methods to detect the relationships of Australian elapids, and to infer their times of origin (Schwaner, *et al.*, 1985). These authors found that immunological evidence supported an origin of Australia's venomous snakes (including the sea snakes and sea kraits) of 12 million years, with some species probably not more than 5 million years old. Moreover, these results are consistent with chromosomal, biochemical, ecological and morphological evidence, as well as (albeit negative) evidence from the fossil record.

As I write this article, the Australian Government has just appointed a committee to find ways of helping people cope with the age of technology. And so it is with studies of

snakes which are becoming increasingly more 'scientific' and less descriptive. One wonders how different an article such as this will be in another one hundred years?

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Blind Snake (*Ramphotyphlops bituberculatus*)



Woma (*Aspidites ramsayi*)



Children's Python (*Liasis childreni*). Photograph by B. Miller.



Carpet Python (*Morelia spilota*). Photograph by B. Miller.





Common Death Adder (*Acanthophis antarcticus*)



Desert Death Adder (*Acanthophis pyrrhus*). Western Australia. Photograph by B. Miller.



Australian Copperhead (*Austrelaps superbus*)



'Pygmy' Copperhead (*Austrelaps* sp.)





Yellow-faced Whip Snake (*Demansia psammophis*)



Master's Snake (*Drysdalia mastersi*). Photograph by M. Hutchinson.



Bardick (*Echiopsis curta*). Photograph by B. Miller.



Red-naped Snake (*Furina diadema*)



Tiger Snake (*Notechis scutatus*). Broad-banded form—SE South Australia.



Tiger Snake (*Notechis scutatus*). Narrow-banded form—Kangaroo Island.



Tiger Snake (*Notechis scutatus*). Unbanded form—Kangaroo Island.



Tiger Snake (*Notechis scutatus*). Red-bellied form—Kangaroo Island. Photograph of a road-killed specimen sent to the South Australian Museum frozen.



Tiger Snake (*Notechis scutatus*). Narrow-banded form—South Flinders Ranges. Photograph by B. Miller.

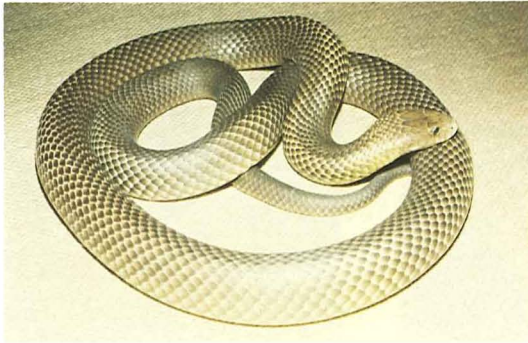


Tiger Snake (*Notechis scutatus*). Melanistic (black) form—West Franklin Island.





Inland Taipan (*Oxyuranus microlepidotus*)



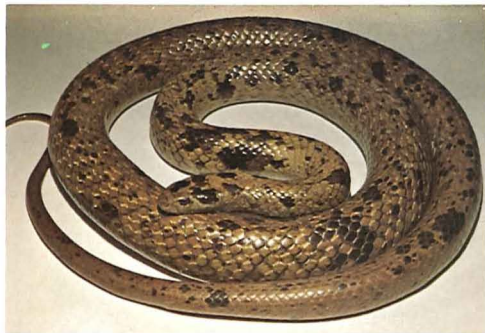
King Brown or Mulga Snake (*Pseudechis australis*)



Red-bellied Black Snake (*Pseudechis porphyriacus*)



Red-bellied Black Snake (*Pseudechis porphyriacus*).  
Snake emerging from embryonic sac just after birth.



Dugite (*Pseudonaja affinis*)



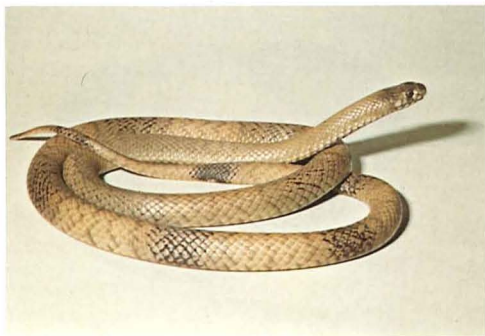
Speckled Brown Snake (*Pseudonaja guttata*). Photograph by B. Miller.



Ringed Brown Snake (*Pseudonaja modesta*)



Gwardar (*Pseudonaja nuchalis*). Black-headed, orange-bodied, form. Photograph by B. Miller.

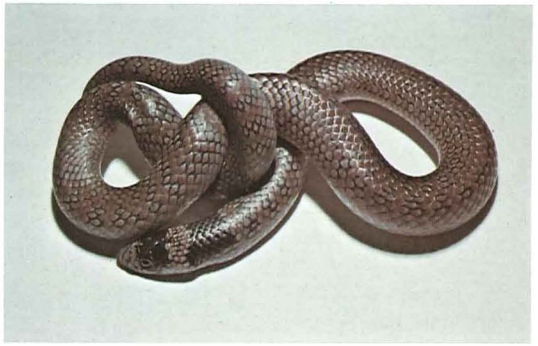


Western Brown Snake (*Pseudonaja nuchalis*). Broad-banded form. Photograph by T. Houston.



Common Brown Snake—adult (*Pseudonaja textilis*). Photograph by T. Morley.

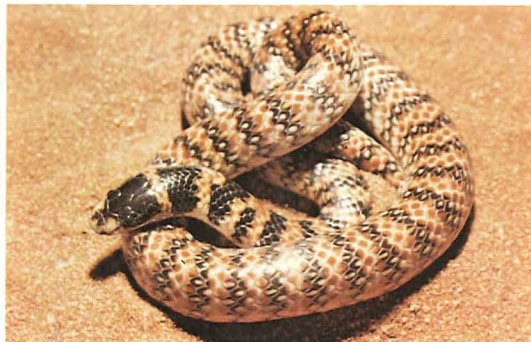




Coral Snake (*Simoselaps australis*).



Jan's Desert Banded Snake (*Simoselaps bertholdi*).  
Three colour forms collected together at the same locality.



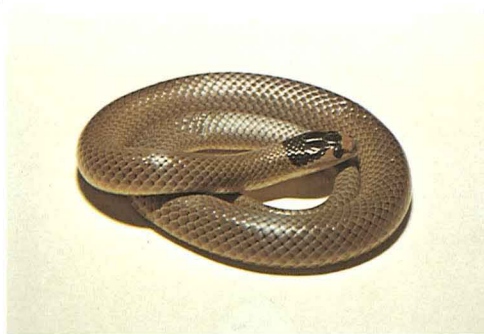
Narrow-banded Snake (*Simoselaps fasciolatus*).



Half-girdled Snake (*Simoselaps semifasciatus*).



Myall or Curl Snake (*Suta suta*).



Little Whip Snake (*Uroechis flagellum*). Photograph by T. Morley.



Hooded Snake (*Uroechis monachus*). Photograph by B. Miller.



*Uroechis spectabilis*. Photograph by T. Morley.



*Uroechis nigriceps*



Bandy-Bandy (*Vermicella annulata*). Photograph by B. Miller.

CURRENT LIST OF SNAKES FROM SOUTH AUSTRALIA <sup>(a) (b)</sup>

## Family TYPHLOPIDAE

- Ramphotyphlops australis*
- R. bituberculatus*
- R. endoterus*
- R. pinguis*
- R. unguistrostris*

## Family BOIDAE

- Aspidites ramsayi*
- Liasis childreni*
- Morelia spilota*

## Family ELAPIDAE

- Acanthophis antarcticus*
- A. pyrrhus*
- Austrelaps superbus*
- A. sp. (c)*
- Demansia psammophis*
- Drysdalia coronoides*
- D. mastersi*
- Echiopsis curta*
- Furina diadema*
- Neelaps bimaculatus*
- Notechis scutatus (d)*
- Oxyuranus microlepidotus (e)*
- Pseudechis australis*
- P. porphyriacus*
- Pseudonaja affinis*
- P. guttata*
- P. modesta*
- P. nuchalis*
- P. textilis*
- Simoselaps anomalus*
- S. australis*
- S. bertholdi*
- S. fasciolatus*
- S. semifasciatus*
- Suta suta*
- Unechis flagellum*
- U. monachus*
- U. nigriceps*
- U. spectabilis*
- Vermicella annulata*

(a) Nomenclature of Cogger (1984).

(b) List based on voucher specimens in the South Australian Museum.

(c) An undescribed species on Kangaroo Island and in the Mount Lofty Ranges (see text).

(d) In a revision of the genus *Notechis* (after Cogger 1984), *N. ater* will not be recognised (Schwaner in prep.).

(e) Name follows Covacevich, *et al.*, 1981.

## **PART 2**

# **EXPLORATION AND COLONISATION**

### **PRE-HISTORY**

Man entered the Australian continent from South-East Asia during the last glaciation at least 40 000 years ago, when sea levels were lower than in recent times. Nevertheless, these first migrations would have entailed sea voyages of at least some sixty kilometres. Settlement was well established at least 25 000 to 30 000 years ago, and by 20 000 years ago almost all the continent was inhabited.

The original Australians lived as hunters and gatherers, using tools of wood, bone and stone. The archaeological evidence indicates that originally there was a simple, pan-continental toolmaking tradition characterised by stone core tools and scrapers used to make further tools of wood. This tradition persisted until 5 000 to 6 000 years ago, when a series of new influences became apparent. A range of more specialised and sophisticated small tools was added to the old technology. The dingo, the only animal domesticated by the Aborigines, also entered the continent at this time. These new influences never reached Tasmania, isolated for some 12 000 years by the post-glacial rising seas, where a few thousand Tasmanian Aborigines maintained the culture of the late Pleistocene period until the European settlement of the island.

The Aborigines probably achieved maximum exploitation of local resources within the limits of their technology. Population balance had apparently been attained long before European settlement, and anthropologists accept that there were at least some 250 000 to 300 000 Aborigines in Australia in 1788. They were divided into some 500 small groups, speaking a variety of languages and dialects. These 'tribes' were further divided into 'bands'—families or clusters of family groups—which formed the basic self-sufficient economic unit and ranged within territorial limits. Labour was divided



between the sexes: the men hunted while the women foraged for the roots, seeds and small animals which formed a basic part of their subsistence. When abundant food or water supplies were available, or when ceremonial obligations demanded, local groups would congregate; in leaner times they scattered. Ceremonial exchanges of goods at these gatherings led to their wide dispersal. Religious and ceremonial activities related to the land were a vital part of Aboriginal life. There is evidence that they had developed the use of ochre as a ritual painting material as early as 25 000 years ago, while some form of ritual burial was also practised at this time.

The physical barriers of distance and aridity within Australia itself were cause, in part, of the cultural isolation and linguistic diversity of its people. European exploration and settlement was for most Aboriginal societies their first contact with an outside culture. The impact of this settlement rapidly led to the disappearance of the traditional Aboriginal way of life in those areas where the colonists established themselves most successfully.

At the time of European settlement of South Australia in 1836 there were about 12 000 Aborigines in South Australia.

### EXPLORATION BEFORE COLONISATION

The Dutch made the first recorded discovery of Australia in 1606 on the Gulf of Carpentaria, and Dutch ships were sighting Western Australia from 1616 onwards. It was in 1627 that the first part of the South Australian coast was discovered when the *Gulden Zeepaard* under the command of Francois Thyssen examined the coastline from Cape Leeuwin to the islands of St Francis and St Peter in the far west of South Australia. On board the *Gulden Zeepaard* was Pieter Nuyts, 'Councillor Extraordinary of India', after whom this area was named 'A Landt Van P. Nuyts'.

As the South Australian coast presented no evidence of prospects for trade, the Dutch, being essentially a trading nation, were not inclined to closer investigation. Indeed, so little interest was displayed in this section of the Australian coastline that it was 165 years before the next recorded sighting of South Australia was made, and this was by a French explorer.

Rear-Admiral D'Entrecasteaux, who had been searching all around Australia for the lost French explorer La Perouse, sighted land south of Cape Leeuwin in December 1792 and examined the cliffs of the Great Australian Bight. He sailed to the head of the Bight, but then after so many miles of barren coast abandoned hope of finding anything other than desolate country, and sailed south for Van Diemen's Land (Tasmania). The early impressions of the South Australian coast were therefore most unfavourable and tended to discourage further investigation.

The British who followed were far more interested in the possibility of colonisation to help ease their population problem at home, and consequently, once the effects of early discouragement had worn off, they began to take an interest in South Australia as a possible site for a new colony. Lieutenant James Grant was the first British explorer to sail along the South Australian coast, sighting the extreme easterly shores of South Australia about 1800. While in Cape Town he had been informed of the discovery of Bass Strait and was instructed to sail through it in the *Lady Nelson* on his way to Port Jackson. Sailing along the extreme south-east coast he named Cape Banks, Cape Northumberland, Mount Schank and Mount Gambier.

The first notable British contribution to the exploration of the South Australian coast came, however, with the voyages of Matthew Flinders in the *Investigator*. With the support of the President of the Royal Society, Sir Joseph Banks, Flinders sailed from England on 18 July 1801. On his voyage of circumnavigation of the Australian continent he thoroughly explored the coast of South Australia between January and April 1802. In

addition he discovered the Gulfs and Central Highlands, thus solving the question of whether a north-south strait divided the Australian land mass in two. More important was the fact that Flinders reported very promising country for settlement. Many places along the coast carry the names given by Flinders; several of these were named after places in his home county of Lincolnshire, e.g. Port Lincoln, Sleaford, the Althorpes and Boston Bay, while others include unusual names such as Backstairs Passage, The Pages, and Antechamber Bay. Flinders was in fact the first man to explore South Australian waters between Nuyts Archipelago and Encounter Bay. It was at Encounter Bay on 8 April 1802 that he met Captain Nicholas Baudin, the French explorer, heading along the coast from the east in *Le Geographe*.

Baudin, in command of *Le Geographe* and accompanied by *Le Naturaliste*, left Le Havre in October 1800 with instructions to explore several specified regions including the then unknown portion of the southern coastline of Australia. After being delayed in the East Indies and Van Diemen's Land, Baudin sailed westward and charted the mainland coast from Western Port to Encounter Bay, where he met Flinders. The object of Baudin's expedition was to make scientific discoveries on behalf of Napoleon, but he had wasted considerable time *en route*. Thus most of the South Australian mainland coast was discovered before him by Grant and Flinders, and he was the original explorer of only a small section between Cape Banks and Encounter Bay. Some French names still remain, for example Lacepede Bay, Guichen Bay and Rivoli Bay. After the meeting at Encounter Bay, Baudin sailed further westward and along the northern shore of Kangaroo Island to Murat Bay, before being forced to abandon further exploration and to return to Port Jackson in June 1802. However, after re-equipping his expedition and with the addition of another ship (*Casuarina*) for charting work in shallow waters, Baudin returned to the South Australian coast by way of King Island in Bass Strait. Leaving King Island on 27 December Baudin in *Le Geographe* and Freycinet in command of *Casuarina* headed direct for Kangaroo Island where they circumnavigated the whole island and charted its coast, being the first to chart its southern and western shores. This was to be the last major contribution made by an official French expedition to exploration of the South Australian coast.

Although these discoveries on the South Australian coast did not lead to any immediate colonisation, there began an increasing series of visits by sealing vessels to Kangaroo Island. A group of American sealers built a schooner on the island in 1804, while wild gangs of sealers and runaway convicts were forming settlements from 1806 onwards. In addition, French exploration in the area had led to a fear on the part of the British authorities that it might result in French colonisation, and, although not greatly valuing the area for itself, the British would have found it an embarrassment to have the French settled on the Australian continent. As a result, in 1804, the British sent Grimes, a government surveyor, to Kangaroo Island to report on it as a possible site for colonisation. The Grimes Report was most unfavourable, stating that the soil was poor and that the island lacked fresh water. On the other hand, in 1819 a Captain Sutherland visited the island and wrote an over-optimistic report on its future. It was this report which later led the South Australian Company into establishing their first station there in 1836.

In the period between 1804 and 1836 a number of further discoveries took place at various parts of the South Australian coastline by Captains Dillon (1815-16), Goold (1827-28), Hart (1831-33), and Jones (1833-34), together with the discovery of Lake Alexandrina by a group of sealers in 1828. Reports of this period were marked by contradictions regarding the suitability of South Australia for settlement. However contradictory as were these accounts reaching England, they managed to convince the founders of South Australia even before 1830 that the available fertile land was more than adequate for the founding of a colony.

The most significant exploration of the period immediately before colonisation was that of Captain Charles Sturt, who explored the River Murray from New South Wales down to its mouth; traversed Lake Alexandrina and located the Goolwa channel, reaching the western shore of the Murray mouth on 12 February 1830. Captain Sturt's journey has become something of an epic in Australian history; with a small party of soldiers and convicts he rowed 2 700 kilometres on the Rivers Murrumbidgee, Darling and Murray. They suffered from desperate weariness, endured a distressing lack of provisions, and were periodically attacked by Aborigines. However, the main object of Sturt's journey was accomplished; the settling of the long insoluble 'problem of the rivers' of south-eastern Australia. But the real significance to South Australia was more than the mere settling of what was little more than an academic question. For his discoveries opened up 3 200 kilometres of navigable inland waterway and gave to Gulf St Vincent, which lay so near the mouth of the Murray, a new significance. It was the age of canal building in Europe and of the development of the Mississippi in America, so that navigable water was considered of prime importance. The exuberance felt by everyone interested in South Australia at such a discovery is typified by the Wakefield theorists who believed that the entire produce of eastern Australia would eventually be shipped from this area. In fact, the Murray became the grand attraction of the scheme. However, Sturt's own fervour at this stage was somewhat cooler than that of interested persons in England for there was one great disappointment which marred his discovery—the Murray lacked a sufficiently safe navigable mouth. Sturt found that the Murray flowed into a series of shallow lakes and a sand-blocked mouth. So little did Sturt's contemporaries understand the earth movements and land formation of the area, that their only conclusion was that there must somewhere be another channel emptying the waters of the Murray into the sea. So, the 'problem of the rivers' was replaced by the 'mystery of the Murray mouth'—and official action was to be taken promptly to solve this mystery.

Governor Darling of New South Wales sent Captain Collet Barker to the southern coast to try to solve the mystery of the Murray. Barker, landing at Noarlunga on 17 April 1831 ascended Mount Lofty and then returned to his ship, the *Isabella*, and examined Port Adelaide. After landing again at Rapid Bay, he crossed the hills to the Murray, thus proving that the river had no westerly outlet. Barker's expedition came to a tragic end when, under mysterious circumstances, he was apparently murdered at the Murray mouth by the usually peaceable Narrinyeri natives. This was the first of a long series of tragic deaths, mainly arising out of navigational difficulties, in the area of the Murray mouth which tended to discourage navigation later. Barker's party, however, reported fertile country in the region and the existence of a pass from the Murray mouth to Rapid Bay on Gulf St Vincent. While Barker's expedition proved without doubt that there was no really navigable connection between the Murray and the sea, it added to the rapidly growing volume of favourable accounts of the fertility of the region around Gulf St Vincent. Interested people in England were so obsessed with the geographical fact of the great Murray waterway opening up the centre of Australia that they barely registered the unfavourable accounts of its egress to the sea.

Probably the greatest encouragement for the settlement of South Australia came from Charles Sturt himself who, after his return to Sydney in May 1830, wrote *Two Expeditions into the Interior of Southern Australia* (published in 1833), in which he said: 'My eye never fell on a country of more promising aspect, or more favourable position, than that which occupies the country between the lake and the ranges of St Vincent's Gulf, and continuing northward from Mount Barker, stretches away without visible boundary'. This glowing report, together with that of Barker's expedition, was welcomed by those in England seeking a suitable site to establish a colony where the principles of the Wakefield Plan could be applied without restriction. Sturt spared no efforts in converting

opinion to the potentialities of South Australia and, as well as his *Two Expeditions*, he wrote a private letter to the Colonial Office on 17 February 1834. Sturt actually marked the present position of the Outer Harbor at Port Adelaide as the proper and natural site for the capital. 'It is in the angle formed by the creek with the coastline that I would recommend the formation of a township, . . . because it appears to me that when the distant interior shall be occupied and communication established with the lake and valley of the Murray, the banks of this creek will be the proper and natural site for the capital. . . . The level country to the north would be overspread, the valley of the Murray would be peopled, every available spot would be located, and its numerous ramifications would afford pasture for thousands of cattle'. In his reasons for this opinion he showed more foresight than he was to do later when, in disagreement with Colonel Light, he supported those who wished to move the capital to Encounter Bay.

Colonel William Light, who had been appointed Surveyor-General of the new colony, sailed from England in the *Rapid* on 4 May 1836 with instructions to select a site for the capital of the colony. After a brief visit to Encounter Bay, which he found unsuitable, he landed at Nepean Bay on Kangaroo Island where some South Australian Company ships had already established a settlement.

From here Light explored the east coast of Gulf St Vincent. Then, pressed for time by the unexpected arrival of the new settlers, he was able to make only a quick trip to Port Lincoln and a brief inspection of part of the west coast of Gulf St Vincent before, in concurrence with Sturt's earlier opinion, he decided that the most suitable site for Adelaide was on the banks of the small, but centrally situated, River Torrens.

### COLONISATION

The colonisation of South Australia was in itself an experiment involving certain new principles and was to represent a turning point in British colonial policy. The period was conducive to colonisation as in Britain there was wide-spread unemployment and poverty, the popular remedy for which was emigration. Nevertheless the somewhat revolutionary nature of the plans was to result in seven years of negotiation and considerable modification of early ideas before the colonisation of South Australia was finally approved.

The theoretician was Edward Gibbon Wakefield, whose ideas were contained in a number of writings including the now famous *A Letter from Sydney* series, written in 1829 while he was imprisoned in Newgate Gaol. Wakefield's plans involved three broad principles: the sale of land; the use of the receipts for sponsoring emigrants; and the granting of some measure of self-government. Drawing on developments in New South Wales, Wakefield argued that the then current system of giving away vast tracts of land to settlers resulted in an imbalance between land and labour. It was therefore desirable to restrict land distribution and increase the labour supply, and this could be done by selling land at a suitably high price to prevent all labourers becoming landowners and by devoting the proceeds to free passage for a carefully selected labour force.

At the same time, following conflicting observations by early explorers, encouraging reports of the South Australian coastline filtering in from traders and seamen gave rise to moves for the practical application of Wakefield's ideas for the founding of a colony in South Australia.

The first attempt to form a colony was made by Robert Gouger who, having met Wakefield in Newgate Gaol in 1829, was so impressed with his ideas as to approach certain interested parties with a view to purchasing a tract of land in South Australia. He was unable, however, to gain sufficient support to interest the Colonial Office in his plans. In 1830 the National Colonization Society was formed with Gouger as its

secretary. The Society served to further disseminate Wakefield's principles, but was not directly associated with plans for a colony in South Australia.

Renewed interest in colonisation followed the first of Captain Sturt's enthusiastic reports of the land of the lower Murray and in 1831 a group of intending settlers, still enthused with the ideas of Wakefield, formed the South Australian Land Company. A committee headed by Colonel Robert Torrens approached the British Government for a charter and then made preparation for the first voyage. The Government was not prepared to grant the necessary territory, and negotiation continued until 1833 when the Company finally conceded that the Government was unlikely to approve any plans involving a chartered colony.

From the same core of enthusiasts who had supported this and earlier ventures there emerged in 1834 the South Australian Association. This group was prepared to abandon hopes for a chartered colony, conceding the issue of self-government, provided that the enabling legislation accommodated Wakefield's other principles for land sales and migration. The passage of the legislation was by no means smooth; the scheme was new and involved untried principles, and knowledge of the territory was still extremely limited. Doubts on the suitability of the site were to be largely dispelled by the writings and personal representations of Sturt and the confirmatory expedition by Barker, and finally in July 1834 legislation for a colony in South Australia was put before Parliament. This legislation represented a considerable compromise on earlier plans.

The South Australian Colonization Act (4 & 5 William IV. Cap. 95) was assented to on 15 August 1834; the persistent efforts of Gouger, Torrens, and many others for a settlement in South Australia had finally borne fruit, and at least some of the ideas of Wakefield were to be tried. The territory allotted under the Act embraced 802 508 square kilometres, with the western boundary the 132nd meridian of east longitude and the other boundaries virtually as they are today. The colony was to be opened to settlement by British subjects, but under no condition were convicts to be admitted, making South Australia the only State to be settled entirely by free persons. Authority was to be divided, with the Colonial Office through the Governor controlling all affairs of government except land sales and immigration, these fields being reserved to a Board of Commissioners. Provision was made for self-government upon the population reaching 50 000. All land alienated by the Crown was to be sold at a price of not less than '12 shillings' (\$1.20) per acre and the whole of the proceeds used in 'conducting the emigration of poor persons from Great Britain and Ireland'.

Although Parliament was prepared to authorise the experiment it was not prepared to finance it; the colony was to be self-supporting. The Commissioners were accordingly authorised to borrow \$400 000 against future general revenue to finance the founding of the colony and the establishment of government, and \$100 000 against the sale of land to start the migration program. Finally, the Act contained two conditional clauses which were to harass the whole venture and served to delay colonisation another twelve months. The first of these conditions, which were to be satisfied before the Commissioners could exercise their general powers, required that government securities to the value of \$40 000 be lodged as a guarantee for the venture. Secondly, land to the value of \$70 000 was to be sold before settlement.

A Board of Commissioners with Torrens as Chairman was appointed early in 1835. The Board immediately offered land in the new colony at \$2 an acre including rights to a city acre with every 80 acres of rural land. In spite of considerable publicity, unsurveyed land in an unknown colony proved difficult to sell, and with less than half the land sold the price was reduced to the permitted minimum of \$1.20 an acre. Finally, George Fife Angas, a member of the Board, together with two others took up the balance

of the land on behalf of the South Australian Company, which was then in the process of being formed.

In December 1835 with sufficient land sold and with the \$40 000 guarantee lodged with the Treasury, the Commissioners were free to begin the business of colonisation. The South Australian Company was formed in January 1836, and in February two ships of the Company, the *John Pirie* and the *Duke of York*, sailed for Kangaroo Island to establish a settlement. Another Company ship the *Lady Mary Pelham* followed later.

The *Cygnets* carrying the Deputy Surveyor, G. S. Kingston and his staff left at the end of March and the *Rapid* with Colonel William Light, Surveyor-General, on board departed at the beginning of May. One of Light's most important tasks was to choose a site for the first settlement and details of his early movements are given on page 44. The first Company vessels reached Kangaroo Island in July, and colonists arrived at Adelaide from early November. The first Governor of the colony, Captain John Hindmarsh RN, arrived at Holdfast Bay on 28 December 1836 and the new colony was officially proclaimed on the same day. By this time some 300 colonists were already in residence. Hindmarsh was to remain in the colony for eighteen months, a period marked by political feuding and very little progress.

The one outstanding feature of the first two years was the work of Light. Expected to carry out difficult tasks with an inadequate staff Light first had to contend with opposition to his choice of a site for Adelaide. His views prevailed and the city was surveyed to his plan and the land was allotted by March 1837. There were 700 one-acre lots in Adelaide south of the River Torrens and 342 one-acre lots in North Adelaide. Victoria Square was situated in the centre of the City and there were four other squares in Adelaide as well as one in North Adelaide. An important feature in Light's plan was the extensive parklands surrounding the City.

The survey of country land for the preliminary purchasers proceeded very slowly and it was not until May 1838 that the first ballot for country sections was held. At the same time the survey staff were becoming increasingly disgruntled with the unrealistic demands of the Commissioners and in June almost the entire staff resigned. Light died in October 1839.

While the preliminary survey was in progress the settlers remained in Adelaide where their energies and resources were largely devoted to speculation in town lands and in land orders, and where supplies had to be imported with a corresponding outflow of capital. Superimposed on this situation was the continual arrival of new immigrants who served only to increase the number of unemployed.

Much of the inactivity of the colony was brought about by constant clashes between Hindmarsh and the Resident Commissioner J. H. Fisher, which finally led to the dismissal of Fisher and the recall of Hindmarsh in July 1838. It was realised that the divided authority as incorporated in the Colonization Act was impracticable, and the next Governor, Colonel George Gawler, was authorised to represent both the Crown and the Commissioners.

Appalled at the stagnation of the colony, Gawler immediately undertook a liberal spending program. Surveying was considerably increased with the result that 200 000 hectares had been surveyed by mid-1841. At the same time an extensive public building and works program provided relief for the unemployed. Generally, Gawler created a renewed state of optimism which remained until 1840 when land values were depreciated and sales declined. Immigrants continued to arrive throughout this period.

Most of Gawler's expenditure was met by bills drawn on the Commissioners in London. In 1841 a situation was reached where the Commissioners could no longer honour these bills and Gawler was summarily replaced by Captain George Grey. The Imperial Parliament met the bulk of the debts, and in 1842 the Board of Commissioners

was abolished. Thus the small measure of independence which the Board represented disappeared and South Australia became an ordinary Crown colony.

The term of office of Grey was in contrast to that of Gawler, with Grey imposing rigid economies. Public expenditure was cut and considerable unemployment with its accompanying hardships followed. Speculation ceased and the unemployed gradually left Adelaide to be absorbed on the lands which Gawler had opened up. By this time the flow of immigrants had ceased with the suspension of the assisted migration scheme.

By 1844 the colony was producing wheat in excess of its needs and when Major Robe succeeded Grey as Lieutenant-Governor in 1845, South Australia finally became self-supporting. Moreover prosperity was on the doorstep; copper had been located at Kapunda in 1843 and a major find was made at Burra in 1845. Heavy immigration followed these discoveries and continued until the Victorian gold rush. Copper soon became the principal export, with wool providing a complementary cargo. In addition, the repeal of the Imperial Corn Laws in 1846 and the Navigation Acts in 1849 strengthened the export trade in grain.

The discovery of gold in Victoria in 1851 had a two-fold influence on the development of South Australia. In the first place it drained off a large proportion of the skilled artisans and forced the closing of the copper mines. Secondly it gave great impetus to agriculture when the price of wheat rose sharply—the feeding of the miners became as attractive a proposition as was the actual mining. Four years later, when the miners returned, many of the more fortunate purchased land with their winnings.

At the same time political changes were taking place and in 1856 South Australia attained self-government.

### EXPLORATION AFTER COLONISATION

Only a minor portion of the area proclaimed as South Australia was to prove economically viable, but extensive exploration with its accompanying hardships was necessary to establish this fact. Post-colonisation exploration was of two forms; the first being the continuous process of discovery as settlers sought grazing and crop lands and sometimes mineral resources, and the second the more deliberate activities of the professional explorers as they sought to cover vast distances through unknown terrain.

The earliest exploratory moves of the colonists were directed towards establishing an overland route between Adelaide and Encounter Bay, and in discovering a north-easterly passage to the River Murray that would by-pass the Mount Lofty Ranges. Contact was first made with Encounter Bay in about July 1837 by Colonel Light and J. H. Fisher, and in December of the same year an expedition by Strangways and Hutchinson played a further important part in making contact with the River Murray by driving a bullock cart across the ranges to Encounter Bay, and then exploring the Murray mouth, the Goolwa channel and the southern part of Lake Alexandrina. The north-easterly route to the Murray was first traversed successfully early in 1838. Penetration of the Mount Lofty Ranges began in 1837, and by the end of the year parties had crossed the ranges and descended to Lake Alexandrina.

From the beginning of 1838 attempts were made to open up stock routes from the eastern States. Joseph Hawdon and Charles Bonney were the first to make an overland cattle drive to Adelaide. Leaving Hawdon's station near Albury on 13 January 1838 with a party of seven men, they took a route which followed the Murray for much of the way, and reached Adelaide in eleven weeks with the cattle in good condition and only four head out of 300 lost *en route*. At the same time Edward John Eyre was making a similar cattle drive, but after unsuccessfully trying to find a suitable trail south of the Murray, he was forced to make his way back to the Loddon River and then follow the trail taken by Hawdon and Bonney. In another journey starting in 1838, Eyre became the first to

bring sheep overland to Adelaide, driving 1 000 sheep and 600 cattle along the Hawdon trail. Charles Sturt was another to make an early stock drive to Adelaide, while Bonney in 1839 pioneered an alternative route which followed the south-east coast of the State and crossed the Murray above Lake Alexandrina.

Other parts of the State were also attracting attention. A section of Yorke Peninsula was visited in 1838, and in the following year a number of expeditions were made into the hinterland of Port Lincoln. Thus by 1840 the area within an 80 kilometre radius of Adelaide had been explored for pastoral, farming and mineral lands. Settlers had also ventured by boat along the Murray, by boat to Port Lincoln and thence inland, and by boat and overland to Yorke Peninsula. Reports by drovers who came down the Murray suggested that the land on the other side of the Murray was of little immediate value. It was soon to be realised, however, that very different conditions prevailed in the Lower South East, and by the mid-1840s this area was supporting a considerable sheep population.

Knowledge of the arid interior and of the far west coast was to be obtained from a number of major expeditions, the first such venture being led by Edward John Eyre. In 1839 Eyre journeyed north to Mount Arden, at the head of Spencer Gulf, where he established a base camp. From Mount Arden he made the first sighting of the dry bed of Lake Torrens. Crossing to Port Lincoln, Eyre proceeded up the west coast of the peninsula which came to bear his name, passed through Streaky Bay, and came to within 80 kilometres of the Western Australian border. The return journey to Mount Arden camp was made across the top of Eyre Peninsula.

The interest of the colonists was now divided between the country to the north, including Eyre's new-found lake, and the possibility of establishing an overland stock route to Western Australia. Eyre having just returned from the desolate country of the Great Australian Bight showed little enthusiasm for the latter idea, and in June 1840 set out for the north. From Mount Arden he made three attempts to penetrate beyond the lakes, but after following the Flinders Ranges to Mount Hopeless and making a number of observations, he concluded that Lake Torrens was a giant horseshoe-shaped salt lake forming an impassable barrier. This erroneous belief was to persist for eighteen years.

Thwarted in his efforts to go north, Eyre decided to attempt the western crossing. Leaving Mount Arden the party separated, one group going direct to Streaky Bay while Eyre went down to Port Lincoln. The party reformed at Streaky Bay and moved to Fowlers Bay, where a camp was established in November 1840. After a number of preliminary explorations around the Bight, Eyre and a small party set out for King George Sound (Albany) in February 1841, having sent the remainder of the party back to Adelaide. Eyre arrived at King George Sound in July after an extremely tortuous crossing.

In 1842 and 1843 the Surveyor-General, Colonel Frome, made two trips to the Lake Torrens region in an attempt to determine the nature of the area. However, after reaching a 'desert-like' Lake Frome (which he believed to be part of Lake Torrens) he turned back, making two short thrusts to the east on the return journey. Frome had seen enough to be able to report that there was no country as far as the meridian 141° (and probably much beyond it) available for either agricultural or pastoral purposes.

Captain Charles Sturt, whose earlier journey down the Murray had helped precipitate the colonisation of South Australia, was again to contribute to South Australian exploration. Considerable mystique had developed concerning Central Australia, including the rumoured presence of an inland sea, and in August 1844 Sturt set out from Adelaide in an effort to unveil this area. Hoping to avoid the supposed horseshoe lake, Sturt followed the Murray and Darling Rivers to Menindee. After passing through Broken Hill and seeing Eyre's Mount Hopeless from the other side of the lakes, the party moved to



Mount Poole some 300 kilometres north of Menindee. Here they rested for six months while waiting for rain to fall. In July 1845 Sturt set off in a north-westerly direction crossing Sturt's Stony Desert and the north-east corner of the State. Although temporary relief was provided by Eyre Creek, the course of which they followed for some considerable distance, the desert nature of the subsequent terrain forced the party to turn back when very close to their central goal, and only 800 kilometres from the Gulf of Carpentaria. A second assault on the desert also failed, although Sturt explored along Cooper Creek for almost 150 kilometres before returning to the base camp and thence to Adelaide in January 1846.

In 1846 John Horrocks led a small party north from his station, Penwortham, through the Flinders Ranges *via* Horrocks Pass (so named by the party) and on to a camp site at Depot Creek. The party had brought with them the only camel then in the colony, the first time one had been used for exploration work in Australia. From Depot Creek, Horrocks made two trips, the first of about 30 kilometres and the second about 100 kilometres to Lake Dutton where, jostled by his camel, he accidentally shot himself, thus bringing the expedition to an early end, but not before he had formed the opinion that there was no suitable pastoral land in that direction. Horrocks died of his wounds about three weeks later.

Further to the west a small expedition led by John Darke explored country to the north and east of the Gawler Ranges, and concluded that there was no useful land for settlers in this region. On his way home to Port Lincoln, Darke was mortally wounded by natives near what is now known as Darke Peak. In 1857 Stephen Hack explored the country west of Lake Gairdner and found useful pastoral country at the south-western end of the Gawler Ranges.

At about this time the northern lakes again became a centre of interest. In 1856 there had been considerable rainfall in the area, and when the Deputy Surveyor-General, G. W. Goyder, visited Lake Torrens he found an inland sea surrounded by excellent vegetation. Goyder's glowing report was, however, discounted by a return journey the following year. Indeed the extremely fickle seasons experienced in the north were to lead to many conflicting reports as the explorers and settlers moved northwards. Between 1857 and 1859 several exploratory expeditions visited the region of Lake Torrens and it was during this period that the myth of the horseshoe lake was destroyed. Knowledge of the lakes district was extended by B. H. Babbage, who discovered Lake Eyre in 1858, and Major P. E. Warburton, who located the first stock crossing. A. C. Gregory, coming south from Queensland in search of Leichhardt, passed between the lakes *en route* to Adelaide in 1858.

At the same time parties were searching for pastoral country in the north, with the most extensive search being made by John McDouall Stuart in 1858. Stuart, who had been in Sturt's party in 1844, set out from Mount Arden, passed to the west of Lake Torrens, and circled north of Coober Pedy, returning to Mount Arden *via* Fowlers Bay. In the meantime the South Australian Government was offering a reward for the first successful north-south crossing of the continent, and after making two exploratory journeys to the north in 1859, Stuart set out in March 1860 to attempt such a crossing.

Stuart had an advantage over Sturt in that the intervening years had revealed the lakes to be passable and thus he was virtually able to begin his expedition at Chambers Creek at the southern tip of Lake Eyre, and to pass through known country as far as The Neales watercourse. Stuart reached the MacDonnell Ranges in the Northern Territory in April, and later the same month estimated that he had reached the centre of the continent. His attempt to reach the northern coastline was thwarted however, and in June he turned back. In a second attempt in 1861 he followed the same route and this time reached Newcastle Waters before being forced to return. At his third attempt Stuart

was successful, reaching the sea on 24 July 1862 and establishing a route which was to be followed by the Overland Telegraph ten years later. A special article on the Overland Telegraph Line was included on pages 526-31 of the *South Australian Year Book* 1972.

While Stuart was making his second attempt to reach the north, the ill-fated Burke and Wills expedition was crossing the continent further to the east. Their journey took them across the north-east corner of the State along much the same path as that followed by Sturt some seventeen years earlier. In 1861 and 1862 parties led by Alfred Howitt, who left from Melbourne and John McKinlay from Adelaide, were to pass through the same area in search of Burke and Wills. After finding traces of the expedition on Cooper Creek, McKinlay pushed east and then north, to reach the Gulf of Carpentaria.

The construction of the Overland Telegraph between 1870 and 1872, and the subsequent maintenance of this link between Adelaide and Darwin, naturally led to minor exploration of the adjacent country. At this stage attention turned to the land between the telegraph line and the settlements of Western Australia. Foremost among the explorers of this region, and whose paths brought them within South Australia, were John Forrest and William Ernest Giles. In March 1870 Forrest left Perth for Adelaide, covering much the same path as Eyre had taken thirty years earlier. Forrest crossed South Australian territory again in 1874 when he travelled from Geraldton in Western Australia across the centre of the continent, coming down the Alberga watercourse to Peake telegraph station.

Giles had set out from the Overland Telegraph in 1873 at a point north of Oodnadatta, but was forced to return after covering approximately half the distance to the western seaboard. He tried again in May 1875, this time going south from Beltana to Port Augusta and then to Ooldea on a route which forty years later was to be closely followed by the east-west railway. From Ooldea the party went north for over 170 kilometres before again striking out to the west. Giles reached Perth in November, and three months later left Geraldton to return to South Australia on a route similar to that taken by Forrest two years earlier, arriving at Peake telegraph station in August 1876.

In 1873 W. C. Gosse returning from an unsuccessful attempt to reach Perth from Alice Springs, discovered and named the Musgrave Ranges.

A number of persons other than those mentioned contributed to the exploration of the State, both in the period discussed and subsequently. The inhospitable nature of the country meant that many areas had to await the coming of the aeroplane before an accurate physical description could be recorded. One such expedition was that led by Donald Mackay in 1935 when the western half of the State north of the east-west railway line was aerially surveyed.

## **PART 3**

# **CONSTITUTION AND GOVERNMENT**

### **3.1 SYSTEM OF GOVERNMENT**

South Australia is one of the six Australian States (originally constituted by Acts of the Imperial Parliament) which at Federation in 1901 ceded many of their powers on matters of national importance (*e.g.* international affairs and defence) to the Commonwealth of Australia. From time to time other powers on matters of local importance have been delegated to local governing bodies. As a result the people of South Australia are subject to the laws of a three-tier system of government. In addition statutory powers within specified fields are exercised by certain public corporations such as the State Bank of South Australia, the Electricity Trust of South Australia, the South Australian Housing Trust and the South Australian Meat Corporation.

Both the Commonwealth and the South Australian Parliaments are bicameral: in each the leader of the Government (the Prime Minister of the Commonwealth and the Premier of South Australia) is seated in the Lower House and in each the Upper House has restricted powers concerning money Bills.

#### **Electorates**

The State is a single multi-member electorate for elections for both the Commonwealth (Senate) and South Australian (Legislative Council) Parliaments. There are ten members elected from South Australia to the Commonwealth Senate; these members are elected for a period of six years with half of them generally retiring each three years.

The South Australian Legislative Council consists of twenty-two members elected for a term of six years, with eleven generally retiring each three years.

Although it is the respective Parliaments alone which have the power to make changes in the number, size, and distribution of electorates, it is customary to appoint electoral commissions to recommend in these matters.

The terms of the Commonwealth Constitution provide for changes in House of Representatives electorates in certain eventualities. Because of a prescribed relationship between population and the distribution of House of Representatives electorates, the Chief Australian Electoral Officer determines the representational entitlement of the States during each Parliamentary triennium, based on the latest available statistics prepared by the Australian Statistician (rather than on Census figures). Should the representation entitlement of any State change consequent upon such a determination, a redistribution is required.

In South Australia the boundaries of electorates are defined in a schedule to the State Constitution, and these have been changed from time to time on the recommendations of various electoral commissions which were appointed at irregular intervals with specific instructions as to how they should divide up the State. However, following an amendment to the Constitution in 1975, a permanent Electoral Commission was appointed in 1976 with instructions to divide the State into forty-seven House of Assembly electoral districts, each district having the same number of electors, with a maximum tolerance of ten per cent from the electoral quota. This Commission also has the duty to review boundaries periodically to maintain equal numbers of electors in electorates.

### **Party System**

Most members of both the Commonwealth and the South Australian Parliaments are elected by the voters from candidates pre-selected and endorsed by the major political parties. Once policy has been determined at a party meeting, members generally observe party solidarity; speaking, voting, and acting in accordance with that policy both in and out of Parliament whether the party be in government or in opposition.

### **Cabinet and Executive Government**

Both in the Commonwealth and in South Australia, executive government is based on the system which was evolved in Britain in the eighteenth century and which is generally known as 'cabinet' or 'responsible' government. Its main principles are that the head of the State, Her Majesty the Queen (or her representative, the Governor-General or Governor, acting on her behalf) should perform governmental acts on the advice of her ministers; that she should choose her principal Ministers of State from members of Parliament belonging to the party or coalition of parties commanding a majority in the popular House; that the Ministry so chosen should be collectively responsible to that House for the government of the State; and that the Ministry should resign if it ceases to command a majority there.

The cabinet system operates chiefly by means of constitutional conventions, customs or understandings and through institutions that do not form part of the legal structure of government at all. The executive power of the Commonwealth is exercisable by the Governor-General and that of South Australia by the Governor, each being advised by an executive council which only meets for formal purposes. The whole policy of a Ministry is in practice determined by some or all of the Ministers of State, meeting without the Governor-General or Governor under the chairmanship of the Prime Minister or Premier. This group of Ministers is known as the Cabinet.

#### *The Cabinet*

The Cabinet does not form part of the legal mechanism of government. Its meetings are private and deliberative, the actual Ministers of the day alone are present, no records of the meetings are made public and the decisions taken have in themselves no legal

effect. At present the seventeen senior Ministers of the Commonwealth Government constitute the Cabinet and other Ministers only attend Cabinet meetings when required, but from 1972 to 1975 all Ministers were members of the Cabinet. In South Australia, all thirteen Ministers are members of Cabinet.

As Ministers are the leaders of the party or parties commanding a majority in the popular House, the Cabinet substantially controls not only the general legislative program of Parliament, but the whole course of Parliamentary proceedings. In effect, though not in form, the Cabinet, by reason of the fact that all Ministers are members of the Executive Council, is also the dominant element in the executive government of the State. In summoning, proroguing or dissolving Parliament, the Governor-General or the Governor is usually guided by the advice tendered him by the Cabinet through the Prime Minister or Premier, although legally the discretion is vested in the Governor-General or Governor himself.

### *Executive Council*

The Executive Council is usually presided over by the Governor-General or Governor, the members holding office during his pleasure. All Ministers of State must be members of the Executive Council. Commonwealth Ministers remain members of the Executive Council on leaving office, but are not summoned to attend its meetings, for it is an essential feature of the cabinet system that attendance should be limited to the Ministers of the day.

The meetings of the Executive Council are formal and official in character and a record of proceedings is kept by the Secretary or Clerk. At Executive Council meetings the decisions of Cabinet are, where necessary, given legal form, appointments are made, resignations accepted, proclamations issued and regulations approved.

### *Appointment of Ministers*

Legally, Ministers hold office during the pleasure of the Governor-General or Governor, but in practice the discretion of the Queen's representative in the choice of Ministers is limited by the conventions on which the Cabinet system rests. When a Ministry resigns the Crown's custom is to send for the leader of the party which commands, or is likely to be able to command a majority in the popular House, and to commission him, as Prime Minister or Premier, to 'form a Ministry'—that is, to nominate other persons to be appointed as Ministers of State and to serve as his colleagues in the Cabinet.

### *Committees*

At one stage in the consideration of every Bill each House resolves itself into Committee for freer discussion of proposed legislation than would be possible under the rules of formal debate usually applied in Parliament.

In addition there is a Committee system whereby a limited number of Members inquire into and report on particular matters, thus enabling a greater volume of work to be handled more effectively. There are Joint Committees, consisting of members of both Houses, and each House has committees to attend to its own functions. Standing Committees (*e.g.* the South Australian Public Works Standing Committee) consider matters of a continuing or recurring nature, and *ad hoc* committees are formed to inquire into and report on specific matters as they arise.

Party representation on Joint and House Committees is usually proportionate to representation in Parliament or the appropriate House respectively.

### Administration

The pattern of public administration in South Australia is determined by the division and delegation of statutory authority already mentioned. Various aspects and areas of administration are attended to by Commonwealth and South Australian Government departments, by local government authorities, and by public corporations deriving authority and responsibility from either Commonwealth or South Australian legislation. Within this framework numerous boards and committees exercise administrative and, in some cases, judicial powers.

These various levels of administration are largely interdependent and complementary. Some items of Commonwealth legislation are completely, or almost completely, administered by State authorities, often in matters in which (the Commonwealth and the State having concurrent powers) Commonwealth legislation either supplements or supersedes State legislation, *e.g.* the Births, Deaths and Marriages Registration Branch applies the *Marriage Act 1961* in this State. Performance of State functions by Commonwealth authorities is neither as frequent nor as extensive, but there are instances of the provision of services or facilities, *e.g.* the Commonwealth Electoral Office maintains the House of Assembly electoral roll; State land tax may be paid at Post Offices.

### Judicature

The degree to which South Australians are subject to the jurisdiction of Commonwealth and South Australian courts respectively varies with the type of action. Most criminal and civil actions are heard, at least originally, in State courts, but many individuals are subject exclusively to jurisdiction of Commonwealth courts in industrial matters.

Generally speaking, the decisions of the lower courts (the South Australian Magistrates and Local Courts) may be the subject of appeal to the State Supreme Court, and the decisions of this higher court, acting in either its original or appellate jurisdiction, may be the subject of appeal to the High Court of Australia.

Included in the jurisdiction of the High Court of Australia is the review of legislation to test its constitutional validity.

## 3.2 COMMONWEALTH GOVERNMENT

### Federation

The Commonwealth of Australia was proclaimed on 1 January 1901 in 'An Act to constitute the Commonwealth of Australia', a statute of the Imperial Parliament, which received Royal Assent in July 1900. The draft constitution, which was enacted with only minor amendment, had been prepared at intercolonial conferences during 1897, 1898, and 1899, and was accepted at referenda during 1899 by South Australia, New South Wales, Victoria, Queensland and Tasmania, and in 1900 by Western Australia.

### Separation of Powers

The Constitution provides, in Sections 52, 69, 86, 90 and 115, for certain powers to be vested exclusively in the Commonwealth Government and, in Section 51, for certain specified fields of interest to be common to both the Commonwealth and State Governments; in cases of conflicting legislation, that of the former prevails to the extent of the inconsistency. All other fields of interest remain the exclusive province of the State Governments until amendment is made to the Constitution Act or until the State Parliaments cede particular powers.

### Financial Resources

Since Federation the distribution of financial resources between the Commonwealth and State Governments has been an almost constant problem. Under the original terms of the Constitution three-quarters of the net revenues from the duties of customs and excise, for ten years, was returned to the States; provision also existed for general and particular grants to the States. Significant changes have been made in the distribution of financial resources since 1910. These are reviewed in some detail in Part 11 Public Finance.

### COMMONWEALTH LEGISLATURE

The Constitution provides that 'the legislative power of the Commonwealth shall be vested in a Federal Parliament, which shall consist of the Queen, a Senate, and a House of Representatives'. Provision for constitutional amendment includes a requirement that a proposed amendment must be submitted to a referendum.

### Franchise

Qualifications for franchise are possessed by any Australian citizen, or any British subject who on 25 January 1984 was enrolled on a Commonwealth electoral roll. The person must be not under eighteen years of age and not disentitled on other grounds, and have lived in Australia for six months continuously. Residence in a subdivision for a period of one month before enrolment, is necessary to enable a qualified person to enrol. Enrolment and voting are compulsory although compulsory enrolment provisions did not apply to Aborigines before 21 February 1984.

Persons of unsound mind, convicted of treason or treachery and not pardoned, convicted and under sentence for any offence punishable by imprisonment for five years or longer or, persons who are holders of temporary entry permits under the *Migration Act 1958* or are prohibited non-citizens under that Act are excluded from the franchise.

### Membership

Qualifications necessary for membership of either House of the Commonwealth Parliament are possessed by any qualified elector who is an Australian citizen of the full age of 18 years. The principal reasons for disqualification of persons otherwise eligible as members of either House are; membership of the other House, allegiance to a foreign power, being attainted of treason, being convicted and under sentence for any offence punishable by imprisonment for one year or longer, being an undischarged bankrupt or insolvent, holding office of profit under the Crown (with certain exceptions), or having pecuniary interest in any agreement with the Public Service of the Commonwealth except as a member of an incorporated company of more than twenty-five persons.

### EXECUTIVE GOVERNMENT

#### Governor-General

On 29 July 1982 His Excellency the Right Honourable Sir Ninian Stephen, AK, GCMG, GCVO, KBE, QC was sworn in as the twentieth Governor-General of the Commonwealth. His authority as the Queen's representative is derived from Letters Patent, instructions under the Royal Sign Manual and Signet, and the relevant sections of the Commonwealth Constitution.

#### Executive Council

Members of the Federal Executive Council are chosen, summoned and sworn by the Governor-General and hold office during his pleasure. All Ministers are members.

Councillors usually retain membership for life but it is customary for attendance at meetings to be limited to Ministers of the day.

### **Ministry**

Members of the forty-eighth Ministry (the second Hawke Ministry) are listed below.

#### **Hawke Ministry at 1 January 1985**

##### **Inner Cabinet**

##### *Prime Minister*

The Hon. R. J. L. Hawke, AC, MP (Vic.)

##### *Deputy Prime Minister, Attorney-General and Minister Assisting the Prime Minister for Commonwealth-State Relations*

The Hon. L. F. Bowen, MP (NSW)

##### *Minister for Industry, Technology and Commerce*

Senator the Hon. J. N. Button, (Vic.)

##### *Minister for Community Services*

Senator the Hon. D. J. Grimes, (Tas.)

##### *Minister for Employment and Industrial Relations and Minister Assisting the Prime Minister for Public Service Industrial Matters*

The Hon. R. Willis, MP (Vic.)

##### *Treasurer*

The Hon. P. J. Keating, MP (NSW)

##### *Special Minister of State*

The Hon. M. J. Young, MP (SA)

##### *Minister for Finance and Minister Assisting the Prime Minister for Public Service Matters*

Senator the Hon. P. A. Walsh, (WA)

##### *Minister for Foreign Affairs*

The Hon. W. G. Hayden, MP (Qld)

##### *Minister for Education and Minister Assisting the Prime Minister on the Status of Women*

Senator the Hon. S. M. Ryan, (ACT)

##### *Minister for Resources and Energy, Minister Assisting the Prime Minister and Minister Assisting the Minister for Foreign Affairs*

Senator the Hon. G. J. Evans, (Vic.)

##### *Minister for Trade and Minister Assisting the Prime Minister for Youth Affairs*

The Hon. J. S. Dawkins, MP (WA)

##### *Minister for Primary Industry*

The Hon. J. C. Kerin, MP (NSW)

##### *Minister for Housing and Construction*

The Hon. S. J. West, MP (NSW)

##### *Minister for Defence*

The Hon. K. C. Beazley, MP (WA)

##### *Minister for Immigration and Ethnic Affairs and Minister Assisting the Treasurer*

The Hon. C. J. Hurford, MP (SA)



*Minister for Social Security*

The Hon. B. L. Howe, MP (Vic.)

**Outer Ministry***Minister for Transport and Minister for Aviation*

The Hon. P. F. Morris, MP (NSW)

*Minister for Sport, Recreation and Tourism and Minister Assisting the Minister for Defence*

The Hon. J. J. Brown, MP (NSW)

*Minister for Health*

The Hon. N. Blewett, MP (SA)

*Minister for Science and Minister Assisting the Minister for Industry, Technology and Commerce*

The Hon. B. O. Jones, MP (Vic.)

*Minister for Territories*

The Hon. G. G. D. Scholes, MP (Vic.)

*Minister for Communications and Minister Assisting the Minister for Defence*

The Hon. M. J. Duffy, MP (Vic.)

*Minister for Arts, Heritage and Environment and Minister Assisting the Prime Minister for the Bicentennial*

The Hon. B. Cohen, MP (NSW)

*Minister for Aboriginal Affairs*

The Hon. A. C. Holding, MP (Vic.)

*Minister for Veterans' Affairs*

Senator the Hon. A. T. Gietzelt, (NSW)

*Minister for Local Government and Administrative Services*

The Hon. T. Uren, MP (NSW)

**Salaries and Allowances**

From 6 October 1983 the annual salary for each Senator and Member has been \$40 156 with an electorate allowance of either \$14 000, \$17 000 or \$20 300 depending on the area of, or population within, the Member's electorate. Senators receive an electoral allowance of \$14 000.

The following additional payments are also made:

Prime Minister—\$44 223 plus expense allowance of \$19 500;

Deputy Prime Minister—\$30 143 plus expense allowance of \$11 500;

Other Ministers—\$20 000 plus expense allowance of \$8 000;

Treasurer—\$24 093 plus expense allowance of \$9 750;

Leader of the House—\$20 000 plus expense allowance of \$8 000;

Speaker (House of Representatives)—\$23 155 plus expense allowance of \$8 000;

President (Senate)—\$23 155 plus expense allowance of \$8 000;

Chairman of Committees (House of Representatives)—\$7 040 plus expense allowance of \$1 650;

Chairman of Committees (Senate)—\$7 040 plus expense allowance of \$1 650;

Leader of the Opposition (House of Representatives)—\$23 155 plus expense allowance of \$9 750;

Deputy Leader of the Opposition (House of Representatives)—\$13 246 plus expense allowance of \$8 000;  
 Leader of the Opposition (Senate)—\$13 246 plus expense allowance of \$8 000;  
 Deputy Leader of the Opposition (Senate)—\$6 675 plus expense allowance of \$1 650;  
 Government Whip (House of Representatives)—\$6 675 plus expense allowance of \$1 650;  
 Opposition Whip (House of Representatives)—\$5 841 plus expense allowance of \$1 650;  
 Deputy Government Whip (House of Representatives)—\$1 956;  
 Deputy Opposition Whip (House of Representatives)—\$939;  
 Other Whips (House of Representatives)—\$3 911;  
 Government Whip (Senate)—\$5 476 plus expense allowance of \$1 650;  
 Opposition Whip (Senate)—\$5 476 plus expense allowance of \$1 650.

### **Superannuation**

The *Parliamentary Contributory Superannuation Act 1948* provides for the payment of superannuation retirement benefits to or in respect of former members of the Commonwealth Parliament. Contributions by Senators and Members are compulsory.

Contributions by members are at the rate of 11·5 per cent of the total of the parliamentary allowance and of any additional salary or allowance in the nature of salary payable by reason of service as a Prime Minister, a Minister, or office-holder in the Parliament. The member's contribution rate is reduced to 5·75 per cent when he obtains his maximum benefit entitlement.

Members who retire involuntarily become eligible for a retiring allowance after eight years service (or less in certain circumstances) while those who retire voluntarily become eligible after twelve years service (or less in certain circumstances). A member who becomes entitled to a retiring allowance, other than on the grounds of ill-health, may elect to convert the whole or a percentage of that retiring allowance to a lump sum payment. Where there is no entitlement to a retiring allowance the benefit is a lump sum payment comprising a refund of contributions plus a supplement, the amount of which depends on whether retirement was involuntary or voluntary.

The scheme also provides for the payment of annuities to eligible widows and widowers of former members. Where the former member was in receipt of a retiring allowance at the time of death, the annuity payable is five-sixths of that allowance or, if the member had elected to commute the whole or part of that allowance, five-sixths of the allowance that would have been payable had the member not elected. Where the member died during parliamentary service, the annuity payable equals five-sixths of the retiring allowance that would have been payable to the member had the member retired involuntarily. An annuity is payable to an eligible dependent child if both parents have died.

## **THE SENATE**

The Senate is the Upper House. Originally it was intended that this House should protect the rights and interests of the States, but with the growth of the parliamentary system of party-line voting, its role has become mainly that of a house of review.

### **Representation**

At present the Senate consists of seventy-six members—twelve from each State, two from the Australian Capital Territory and two from the Northern Territory. The original

provision was that each State, voting as a single electorate, should elect six Senators but by the Representation Act of 1983, which was effective for the 1984 elections, the number was raised to twelve. By the *Senate (Representation of Territories) Act 1973*, two Senators were added from both the Australian Capital Territory and the Northern Territory. The Territories were represented in the Senate for the first time following the general election of 13 December 1975. Except in extraordinary circumstances each Senator is elected for a term of six years, six from each State and all Territory Senators retiring every three years.

From 1 July 1985 representation in the Senate was as follows:

State or Territory	ALP	LP	NP	AD	NDP	IND
New South Wales .....	6	4	1	1	—	—
Victoria .....	5	5	—	2	—	—
Queensland .....	5	2	4	1	—	—
Western Australia .....	6	5	—	—	(a) 1	—
<b>South Australia</b> .....	<b>5</b>	<b>5</b>	—	<b>2</b>	—	—
Tasmania .....	5	5	—	1	—	1
Australian Capital Territory .....	1	1	—	—	—	—
Northern Territory .....	1	1	—	—	—	—

(a) Elected for NDP, but chose to sit in the Senate as an Independent.

ALP Australian Labor Party LP Liberal Party of Australia NP National Party AD Australian Democrats  
NDP Nuclear Disarmament Party IND Independent

#### Elections for the Senate: Voting, South Australia

Date of Election	Electors Enrolled	Votes Recorded		Informal Votes	
		Number	Percentage of Electors Enrolled	Number	Percentage of Votes Recorded
10 December 1955 .....	462 747	444 827	96·13	39 802	8·95
22 December 1958 .....	490 930	473 832	96·52	36 677	7·74
9 December 1961 .....	521 396	501 312	96·15	28 284	5·64
5 December 1964 .....	551 341	528 464	95·85	39 421	7·46
25 November 1967 .....	594 480	568 823	95·68	32 864	5·78
21 November 1970 .....	639 807	609 268	95·23	42 306	6·94
18 May 1974 .....	750 308	722 434	96·28	82 191	11·38
13 December 1975 .....	789 004	759 369	96·24	75 540	9·95
10 December 1977 .....	824 205	783 669	95·08	81 451	10·39
18 October 1980 .....	849 899	806 695	94·92	70 359	8·72
5 March 1983 .....	880 455	836 699	95·03	73 350	8·77
1 December 1984 .....	906 278	862 369	95·16	46 399	5·38

The members representing South Australia in the Senate are:

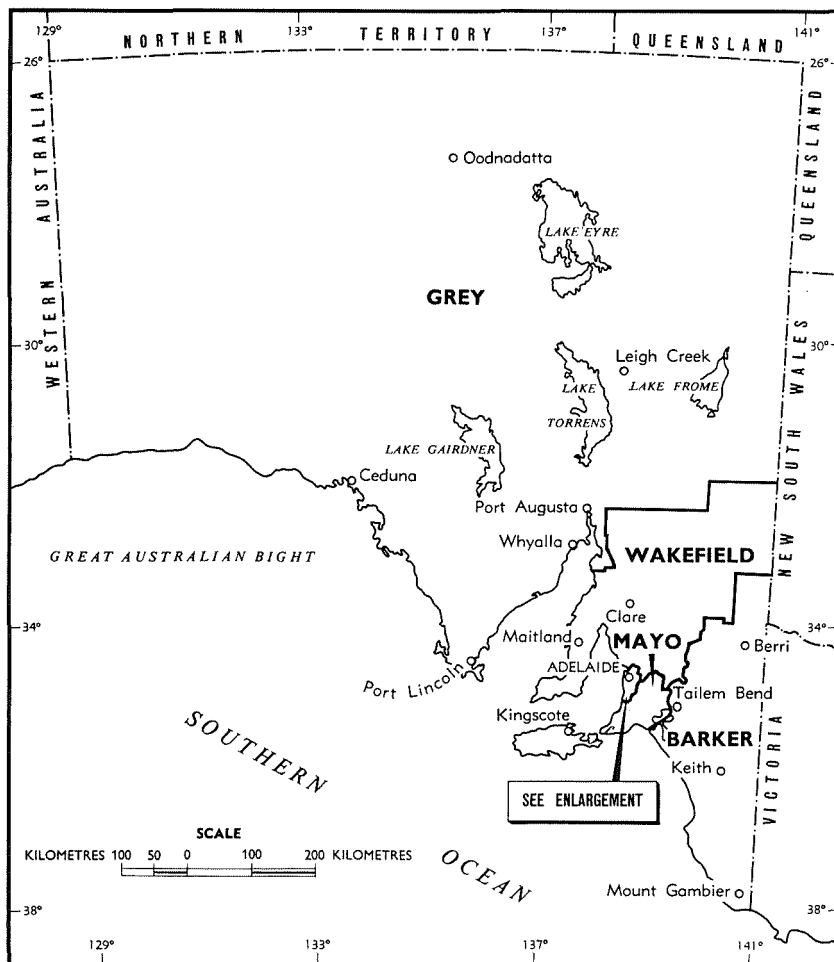
*To Retire 30 June 1988:*

Elstob, Ronald Charles (ALP)  
Foreman, Dominic John (ALP)  
Messner, Anthony John (LP)  
Hill, Robert Murray (LP)  
Haines, Janine (AD)  
Vigor, David Bernard (AD)

*To Retire 30 June 1991:*

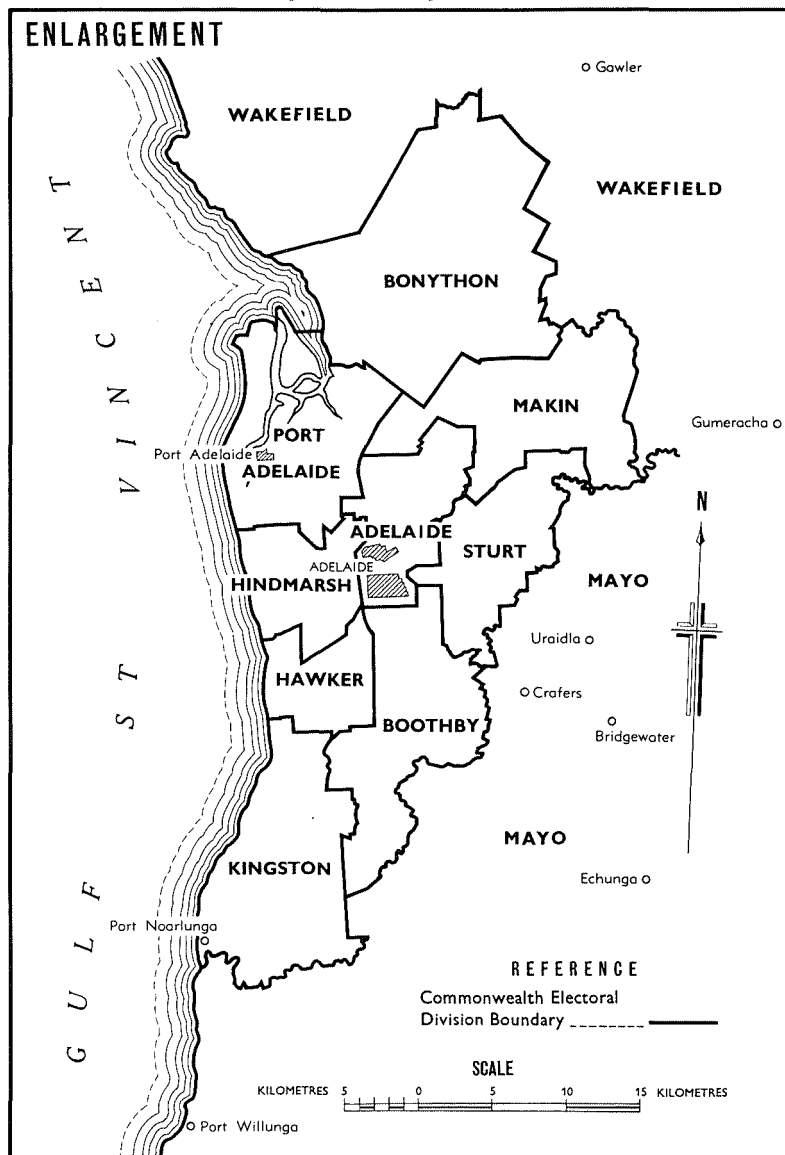
Bolkus, Nick (ALP)  
Maguire, Graham Ross (ALP)  
Crowley, Rosemary Anne (ALP)  
Jessop, Donald Scott (LP)  
Teague, Baden Chapman (LP)  
Vanstone, Amanda Eloise (LP)

# SOUTH AUSTRALIA COMMONWEALTH ELECTORAL DIVISIONS As proclaimed 3 September 1984



# PORTION OF SOUTH AUSTRALIA COMMONWEALTH ELECTORAL DIVISIONS

As proclaimed 3 September 1984



### Voting System

Before the election in 1949 the system of preferential voting was used for Senate elections, but for the 1949 and subsequent elections a system of proportional representation has been used.

## THE HOUSE OF REPRESENTATIVES

### Representation

The members of the House of Representatives (the Lower House) are elected in single-member electorates. The number of electorates into which a State is divided is determined by the proportion that the population of the State bears to the population of the Commonwealth as a whole. Section 24 of the Constitution provides that the number of members in the House of Representatives shall be as nearly as possible twice the number of Senators and prescribes the formula to be used, 'until the Parliament otherwise provides', for allocating to each State its share of the available seats but stipulates that no original State shall have less than five members in the House. In addition one member is elected from the Northern Territory and two members are elected from the Australian Capital Territory. Preferential voting is used for elections for the House of Representatives.

#### Elections for the House of Representatives: Voting, South Australia

Date of Election	Electors Enrolled	Votes Recorded		Informal Votes	
		Number	Percentage of Electors Enrolled	Number	Percentage of Votes Recorded
10 December 1955 .....	462 747	444 827	96.13	18 050	4.06
22 December 1958 .....	490 930	473 832	96.52	15 619	3.30
9 December 1961 .....	521 396	501 312	96.15	15 629	3.12
30 November 1963 .....	541 536	523 135	96.60	13 963	2.67
26 November 1966 .....	585 465	563 341	96.22	16 220	2.88
25 October 1969 .....	624 626	599 719	96.01	20 562	3.43
2 December 1972 .....	671 081	644 211	96.00	16 845	2.61
18 May 1974 .....	750 308	722 434	96.28	20 311	2.81
13 December 1975 .....	789 004	759 369	96.24	18 201	2.40
10 December 1977 .....	824 205	783 669	95.08	26 461	3.38
18 October 1980 .....	849 899	806 695	94.92	22 491	2.79
5 March 1983 .....	880 455	836 699	95.03	22 380	2.67
1 December 1984 .....	906 278	859 629	94.85	74 719	8.69

Following electoral distributions of House of Representatives seats in 1984 by augmented Electoral Commissions for all States and Territories, the number of members of the House of Representatives was increased from 125 to 148. The number of South Australian seats was increased from eleven to thirteen, with the new seats of Makin and Mayo being created.

After the election of 1 December 1984 representation in this House was as follows:

Party	NSW	Vic.	Qld	WA	SA	Tas.	ACT	NT	Total
ALP .....	29	25	9	9	8	—	2	—	82
LP .....	12	11	7	4	5	5	—	1	45
NP .....	10	3	8	—	—	—	—	—	21

ALP Australian Labor Party LP Liberal Party of Australia NP National Party

**House of Representatives, 1984 Election**  
**Voting and Party Representation in South Australian Electorates**

Electorate	Electors on Roll	Electors Voting	Successful Candidates		
			Name	Party	First Preference Votes
Adelaide .....	74 290	70 221	Hurford, C. J.	ALP	34 960
Barker .....	69 832	66 717	Porter, J. R.	LP	35 429
Bonython .....	67 107	63 571	Blewett, N.	ALP	35 817
Boothby .....	69 655	65 497	Hall, R. S.	LP	33 640
Grey .....	70 024	66 330	O'Neil, L. R. T.	ALP	31 518
Hawker .....	71 984	68 125	Jacobi, R.	ALP	30 956
Hindmarsh .....	72 154	68 053	Scott, J. L.	ALP	31 595
Kingston .....	65 897	62 799	Bilney, G. N.	ALP	29 140
Makin .....	66 033	62 698	Duncan, P.	ALP	27 282
Mayo .....	67 689	64 399	Downer, A. J. G.	LP	31 131
Port Adelaide ....	71 105	67 438	Young, M. J.	ALP	37 440
Sturt .....	69 931	66 435	Wilson, I. B. C.	LP	32 404
Wakefield .....	70 577	67 346	Andrew, J. N.	LP	35 574

### REFERENDA

Alteration to the Constitution must be initiated in the Commonwealth Parliament and requires the approval of a majority of electors voting in a majority of the States as well as a majority of all the electors voting in the Commonwealth as a whole.

Of the thirty-eight proposals so far submitted to the people of Australia for amendment to the Constitution, only eight have been approved (one in each of 1906, 1910, 1928, 1946 and 1967, and three in 1977). In addition proposals concerning compulsory overseas military service were submitted to the people in 1916 and 1917 respectively; both proposals failed to gain the necessary majority of votes.

At the most recent referendum, held on 1 December, 1984, two alterations to the Constitution were proposed. Both proposals were defeated.

### THE COMMONWEALTH OMBUDSMAN

The office of the Commonwealth Ombudsman was created by the *Ombudsman Act 1976*. This Act sets out the Commonwealth Ombudsman's role which is to investigate complaints made by members of the public about the administrative actions of officials of Commonwealth government departments and prescribed authorities. The Commonwealth Ombudsman can also investigate complaints about the conduct of the Australian Federal Police.

The Commonwealth Ombudsman is located in Canberra and there are branch offices in all capital cities to receive and investigate complaints.

Under the Ombudsman Act, the Commonwealth Ombudsman is prohibited from investigating a complaint about a person's employment in a Commonwealth department or prescribed authority. The Act was amended in October 1983 to create the position of Defence Force Ombudsman (to be held by the Commonwealth Ombudsman) who is specifically empowered to investigate complaints about actions related to or arising from the service of a member in the Defence Forces.

The Commonwealth Ombudsman may decline to investigate a complaint if satisfactory alternative review mechanisms exist. His jurisdiction does not extend to investigation of the actions of a government minister or a judge, State government departments or authorities, or the actions of private persons, businesses or companies.

Complaints can be made either by telephone, personal visit or by letter. The Ombudsman conducts his investigations in private and informs complainants of the outcome. There is no charge for the Ombudsman's investigation of a complaint.

During 1982-83, the Assistant Commonwealth Ombudsman in South Australia received 210 written complaints and 1 176 oral complaints.

### 3.3 GOVERNMENT OF SOUTH AUSTRALIA

The Constitution Act, 1855-1856, which inaugurated the system of responsible government in South Australia, was passed and came into force on 24 October 1856. A summary of early constitutional history and the introduction of responsible government was included on pages 60-2 of the *South Australian Year Book* 1971.

#### VICE-REGAL REPRESENTATION

Lt-General Sir Donald Beaumont Dunstan, KBE, CB, was sworn in as the Queen's representative in South Australia on 23 April 1982.

The title of the vice-regal representative has been varied from time to time. The first three holders of the Office were styled 'Governor and Commander-in-Chief', the next two, 'Lieutenant-Governor', and the following two, 'Captain-General and Governor-in-Chief'. The title then reverted to its original form until Federation in 1901. Since then, because of the appointment of a 'Governor-General and Commander-in-Chief in and over the Commonwealth', the holder of the State office has been described simply as 'Governor', and this title is used in the following table, which lists occupants of the office since the foundation of South Australia.

As titular head of the Government of South Australia the Governor exercises powers, duties, and functions, similar to those of a constitutional sovereign. On the one hand he is indirectly responsible to the Imperial Parliament through the Secretary of State for Foreign and Commonwealth Affairs, and on the other hand he usually acts on the advice of his Ministers, who take the responsibility for their advice. Nevertheless, the Governor retains important spheres of discretionary action and is thus enabled to maintain something of a safeguard against malpractice and injustice, particularly in extreme circumstances. To ensure continuity of services, the Governor has power to appropriate up to one per cent of the total amount appropriated from the State's general revenue by the Appropriation Acts for public service without specific Parliamentary authority.

#### Governors of South Australia

Name	From	To
Captain John Hindmarsh, RN, KH .....	28 December 1836	16 July 1838
Lt-Col George Gawler, KH .....	17 October 1838	15 May 1841
George Grey .....	15 May 1841	25 October 1845



## Governors of South Australia (continued)

Name	From	To
Lt-Col Frederick Holt Robe .....	25 October 1845	2 August 1848
Sir Henry E. F. Young .....	2 August 1848	20 December 1854
Sir Richard G. MacDonnell, CB .....	8 June 1855	4 March 1862
Sir Dominick Daly .....	4 March 1862	19 February 1868
Rt Hon. Sir James Fergusson, Bart .....	16 February 1869	18 April 1873
Sir Anthony Musgrave, KCMG .....	9 June 1873	29 January 1877
Lt-Gen. Sir Wm F. D. Jervois, GCMG, CB	2 October 1877	9 January 1883
Sir Wm C. F. Robinson, GCMG .....	19 February 1883	5 March 1889
Rt Hon. the Earl of Kintore, PC, GCMG	11 April 1889	10 April 1895
Sir Thomas F. Buxton, Bart, GCMG .....	29 October 1895	29 March 1899
Rt Hon. the Lord Tennyson, KCMG .....	10 April 1899	17 July 1902
Sir George R. Le Hunte, KCMG .....	1 July 1903	18 February 1909
Admiral Sir Day Hort Bosanquet, GCV, KCB .....	18 February 1909	22 March 1914
Lt-Col Sir Henry L. Galway, KCMG, DSO	18 April 1914	30 April 1920
Lt-Col Sir Wm E. G. Archibald Weigall, KCMG .....	9 June 1920	30 May 1922
Lt-Gen. Sir George T. M. Bridges, KCB, KCMG, DSO .....	4 December 1922	4 December 1927
Brig.-Gen. the Hon. Sir A. G. A. Hore-Ruthven, VC, KCMG, CB, DSO ....	14 May 1928	26 April 1934
Maj.-Gen. Sir W. J. Dugan, KCMG, CB, DSO .....	28 July 1934	23 February 1939
Sir Charles M. Barclay-Harvey, KCMG	12 August 1939	26 April 1944
Lt-Gen. Sir C. W. M. Norrie, KCMG, CB, DSO, MC .....	19 December 1944	19 June 1952
Air Vice-Marshal Sir Robert A. George, KCMG, KCVO, KBE, CB, MC .....	23 February 1953	7 March 1960
Lt-Gen. Sir Edric M. Bastyan, KCMG, KCVO, KBE, CB .....	4 April 1961	1 June 1968
Maj.-Gen. Sir James W. Harrison, KCMG, CB, CBE .....	4 December 1968	16 September 1971
Sir Mark L. Oliphant, KBE .....	1 December 1971	30 November 1976
Sir Douglas R. Nicholls, KCVO, OBE .....	1 December 1976	30 April 1977
Sir Keith D. Seaman, KCVO, OBE .....	1 September 1977	28 March 1982
Lt-Gen. Sir Donald B. Dunstan, KBE, CB	23 April 1982	

A Governor is normally appointed for a term of five years, but he can be reappointed for one or more subsequent terms. At present he is granted a basic salary of \$30 000 a year and an expense allowance which is altered in accordance with the Consumer Price Index number for Adelaide. The amount appropriated from Consolidated Revenue for the Governor's salary and allowances for 1983-84 was \$97 800. The Governors' Pensions Act, 1976-1981 provides for a pension to be paid to former Governors and to the spouses of deceased Governors.

In the absence or prolonged illness of a Governor other persons have been appointed to administer the government of the State. These persons have been variously styled 'Lieutenant-Governor', 'Deputy-Governor', 'Deputy Lieutenant-Governor', and 'Administrator', and several of them have held office more than once. The nineteen persons so appointed are shown in the following table.

## Deputy Governors

Name	Occupancy of Office		Occasions in Office	Total Period	
	First	Most Recent		Years	Days
George Milner Stephen .....	16/7/1838	17/10/1838	1	—	93
Boyle Travers Finnis .....	20/12/1854	8/6/1855	1	—	170
Lt-Col Francis G. Hamley .....	19/2/1868	16/2/1869	1	—	364
Maj. James Harwood Locke .....	6/4/1870	5/5/1870	1	—	29
Hon. Sir Richard D. Hanson .....	7/12/1872	9/6/1873	1	—	184
Rt Hon. Sir Samuel J. Way, Bart	29/1/1877	17/11/1915	65	6	117
William W. Cairns, CMG .....	24/3/1877	17/5/1877	1	—	54
Hon. James P. Boucaut .....	26/10/1885	16/9/1897	9	—	263
Hon. William H. Bunday .....	30/7/1888	9/8/1888	1	—	10
Hon. Sir G. J. R. Murray, KCMG	25/9/1916	9/2/1942	103	6	47
Hon. Thomas Slaney Poole .....	20/3/1925	22/11/1925	2	—	240
Hon. Sir H. Angus Parsons .....	11/6/1935	19/2/1942	6	—	54
Hon. Sir J. Mellis Napier, KCMG	21/4/1942	17/5/1973	179	9	140
Hon. Sir Herbert Mayo .....	15/10/1946	9/1/1965	25	—	187
Hon. Sir G. S. Reed .....	24/7/1951	4/11/1957	5	—	31
Hon. J. J. Bray .....	25/6/1968	5/8/1973	8	—	72
Hon. D. S. Hogarth .....	8/7/1971	8/7/1971	1	—	1
Sir W. R. Crocker, KBE .....	7/9/1973	23/4/1982	27	1	32
Hon. Sir C. L. Laucke, KCMG ....	1/7/1982	23/1/1985	14	—	161½

## CABINET AND EXECUTIVE GOVERNMENT

In South Australia all Ministers are members of the Cabinet and all Ministers are *ex officio* members of the Executive Council. Although the Governor may, subject to any law enacted by the Legislature, appoint other persons to the Executive Council, membership is in practice limited to Ministers of the day.

The Constitution Act of 1855-1856 provided that every Minister must be a member of either the Legislative Council or the House of Assembly or become a member within three months of appointment. However, in 1873 an amendment was made to the Act authorising the Governor to appoint an Attorney-General from outside Parliament; this provision was retained until 1953 and four Attorneys-General were so appointed.

The maximum number of Ministers has been varied from time to time. In 1856 the number was five; in 1873, six; 1901, four; 1908, six; 1953, eight; 1965, nine; 1970, ten; 1973, eleven; 1975, twelve and 1978, thirteen. In 1908 it was specified that no more than four Ministers were to be in the House of Assembly, but in 1953 this limit was increased to five, in 1965 to six, in 1970 to seven and in 1973 to eight. This restriction on the number of Ministers from the Lower House was removed by the Constitution Act Amendment Act (No. 2), 1975, and now it is permissible for all Ministers to be selected from the House of Assembly.

The Constitution of 1856 provided for salary payments to Ministers only and salary payments to other members did not commence until 1887. For details of salaries and allowances paid to members of Parliament *see* page 71.

Cabinet, as such, has no legal powers. Some Cabinet decisions result in the initiation and subsequent enactment of legislation; other decisions become legally binding through ratification by Executive Council or through powers vested in individual Ministers for the administration and control of their respective departments of government. In addition to government departments, statutory authorities also come under some degree of ministerial or parliamentary oversight.

**Premiers**

Since 1856 the following thirty-nine persons have held the office of Premier.

**Premiers of South Australia**

Name	Dates of Office	Total Period in Office	
		Years	Days
Hon. Boyle T. Finnis	24/10/1856- 21/8/1857	—	301
Hon. John Baker	21/8/1857- 1/9/1857	—	11
Hon. Robert R. Torrens	1/9/1857- 30/9/1857	—	29
Hon. Richard D. Hanson	30/9/1857- 9/5/1860	2	222
Hon. Thomas Reynolds	9/5/1860- 8/10/1861	1	152
Hon. G. M. Waterhouse	8/10/1861- 4/7/1863	1	269
Hon. Francis S. Dutton	4/7/1863- 15/7/1863; 22/3/1865- 20/9/1865	—	193
Hon. Sir Henry Ayers, KCMG	15/7/1863- 4/8/1864; 20/9/1865-23/10/1865; 3/5/1867- 24/9/1868; 13/10/1868- 3/11/1868; 22/1/1872- 22/7/1873	4	35
Hon. Arthur Blyth	4/8/1864- 22/3/1865; 10/11/1871- 22/1/1872; 22/7/1873- 3/6/1875	2	254
Hon. John Hart, CMG	23/10/1865- 28/3/1866; 24/9/1868-13/10/1868; 30/5/1870-10/11/1871	1	339
Hon. James P. Boucaut, QC	28/3/1866- 3/5/1867; 3/6/1875- 6/6/1876; 26/10/1877- 27/9/1878	3	11
Hon. H. B. Strangways	3/11/1868- 30/5/1870	1	208
Hon. John Colton	6/6/1876-26/10/1877; 16/6/1884- 16/6/1885;	2	142
Hon. William Morgan	27/9/1878- 24/6/1881	2	270
Hon. John C. Bray	24/6/1881- 16/6/1884	2	358
Hon. Sir J. W. Downer, KCMG, QC	16/6/1885- 11/6/1887; 15/10/1892- 16/6/1893	2	239
Hon. Thomas Playford	11/6/1887- 27/6/1889; 19/8/1890- 21/6/1892	3	323
Hon. J. A. Cockburn	27/6/1889- 19/8/1890	1	53
Hon. F. W. Holder	21/6/1892-15/10/1892; 8/12/1899- 15/5/1901	1	274
Rt Hon. C. C. Kingston, QC	16/6/1893- 1/12/1899	6	168
Hon. V. L. Solomon	1/12/1899- 8/12/1899	—	7
Hon. J. G. Jenkins	15/5/1901- 1/3/1905	3	290
Hon. Richard Butler	1/3/1905- 26/7/1905	—	147
Hon. Thomas Price	26/7/1905- 5/6/1909	3	314
Hon. A. H. Peake	5/6/1909- 3/6/1910; 17/2/1912- 3/4/1915; 14/7/1917- 8/4/1920	6	312
Hon. John Verran	3/6/1910- 17/2/1912	1	259
Hon. Crawford Vaughan	3/4/1915- 14/7/1917	2	102
Hon. Sir H. N. Barwell, KCMG	8/4/1920- 16/4/1924	4	8
Hon. John Gunn	16/4/1924- 28/8/1926	2	134
Hon. Lionel L. Hill	28/8/1926- 8/4/1927; 17/4/1930- 13/2/1933	3	160

**Premiers of South Australia (continued)**

Name	Dates of Office	Total Period in Office	
		Years	Days
Hon. R. L. Butler .....	8/4/1927- 17/4/1930; 18/4/1933- 5/11/1938	8	210
Hon. R. S. Richards .....	13/2/1933- 18/4/1933	—	64
Hon. Sir Thomas Playford, GCMG .....	5/11/1938- 10/3/1965	26	125
Hon. F. H. Walsh .....	10/3/1965- 1/6/1967	2	83
Hon. D. A. Dunstan, QC .....	1/6/1967- 17/4/1968; 2/6/1970- 15/2/1979	8	259
Hon. R. S. Hall .....	17/4/1968- 2/6/1970	2	47
Hon. J. D. Corcoran .....	15/2/1979- 18/9/1979	—	216
Hon. D. O. Tonkin .....	18/9/1979- 6/11/1982	3	49
Hon. J. C. Bannon .....	6/11/1982-		

**Ministry**

The Ministry is the sixty-fifth to hold office. The members at 1 July 1985 were:

*Premier, Treasurer, Minister of State Development and Minister for the Arts*

Hon. John Charles Bannon, MP

*Deputy Premier, Minister of Labour, Chief Secretary and Minister of Emergency Services*

Hon. John David Wright, MP

*Attorney-General, Minister of Consumer Affairs, Minister of Corporate Affairs and Minister of Ethnic Affairs*

Hon. Christopher John Sumner, MLC

*Minister for Environment and Planning, Minister of Lands and Minister of Repatriation*

Hon. Donald Jack Hopgood, MP

*Minister of Transport and Minister of Marine*

Hon. Roy Kitto Abbott, MP

*Minister of Health*

Hon. John Robert Cornwall, MLC

*Minister of Education and Minister for Technology*

Hon. Lynn Maurice Ferguson Arnold, MP

*Minister of Tourism and Minister of Local Government*

Hon. Gavin Francis Keneally, MP

*Minister of Mines and Energy*

Hon. Ronald George Payne, MP

*Minister of Community Welfare and Minister of Aboriginal Affairs*

Hon. Gregory John Crafter, MP

*Minister of Water Resources and Minister of Recreation and Sport*

Hon. John William Slater, MP

*Minister of Housing and Construction and Minister of Public Works*

Hon. Terence Henry Hemmings, MP

*Minister of Agriculture, Minister of Fisheries, Minister of Forests and Minister of Correctional Services*

Hon. Frank Trevor Blevins, MLC

## PARLIAMENT

Parliament is summoned, prorogued, or dissolved, by proclamation issued by the Governor. The two Houses of Parliament are the Legislative Council (Upper House) and the House of Assembly (Lower House). The following table gives the dates and the number of House of Assembly sitting days for Parliamentary sessions in recent years.

Parliamentary Session	Period	House of Assembly Sitting Days
1975-76 .....	5/8/75-19/2/76	45
1976-77 .....	8/6/76-28/4/77	65
1977 .....	19/7/77-17/8/77	11
1977-78 .....	6/10/77-22/3/78	45
1978-79 .....	13/7/78-1/3/79	55
1979 .....	24/5/79-22/8/79	11
1979-80 .....	11/10/79-12/6/80	35
1980-81 .....	31/7/80-11/6/81	56
1981-82 .....	16/7/81-18/6/82	68
1982 .....	20/7/82-14/10/82	27
1982-83 .....	8/12/82-2/6/83	26
1983-84 .....	4/8/83-10/5/84	56
1984 .....	2/8/84-6/12/84	34

## Voting System

Members for both Houses are elected by secret ballot; the preferential system of voting is used. In filling the vacancy for each House of Assembly district the candidate who has received the largest number of first preference votes is elected if this number constitutes an absolute majority (*i.e.* greater than one-half of the total formal votes). If no candidate has received an absolute majority of first preference votes a second count is made in which the second preferences of the candidate who has received the fewest first preference votes are distributed. This distribution of second preferences of the successive candidate with the fewest votes is repeated until one candidate has received an absolute majority of votes.

For Legislative Council elections before 12 July 1975, the State was divided into five 4-member electoral districts with two members for each district retiring at each Legislative Council election. The first vacancy in each district was filled in the same manner as those in the single-member House of Assembly districts discussed above. The second vacancy in each district was filled by re-arranging all ballot papers according to first preferences and allotting each ballot paper of the first elected candidate according to the second preferences. If a candidate then had an absolute majority he was elected, otherwise subsequent counts were made eliminating candidates with the fewest votes until one remaining candidate had received an absolute majority.

However, as a result of the passing of the Constitution and Electoral Acts Amendment Act, 1973, the number of electorates and the voting system has been changed for Legislative Council elections commencing with the election of 12 July 1975. This Act increased the number of members of the Legislative Council from twenty to twenty-two and introduced a system of proportional representation with the whole of the State as a single multi-member electoral district. A further amendment was made in 1981 which was effective for the first time at the 1982 election. The list system introduced in the 1973 legislation was abolished, and electors are required to vote for the requisite number of candidates to be elected. Provision is made for full preferential voting and for the distribution of preferences.

### Members, Qualifications, and Privileges

Certain requirements must be met before a person qualifies for membership of the South Australian Parliament. The following persons are not eligible for membership of either House: Judges, persons under the age of eighteen, aliens, members of the Commonwealth Parliament, persons who are not residents of South Australia, holders of contracts for the Public Service, occupants of offices of profit under the Crown, persons of unsound mind, persons attainted of treason, undischarged bankrupts and insolvent persons, and, amongst others, persons under sentence for any offence punishable by imprisonment for at least a year. Other requirements applicable only to one House or the other are mentioned on pages 72-4.

Each member is required to take an oath or make an affirmation of allegiance to the Crown before being permitted to sit or vote in Parliament. All members of the Parliament are entitled to such privileges, immunities, and powers as were held by members of the House of Commons on 24 October 1856, the date on which the Constitution Act came into force.

### Franchise

The franchises for the separate Houses are shown on page 73. South Australia was the first, at the general election of 25 April 1896, of the Australian States to give voting rights to women, and the existence of this provision in this State contributed to the decision to include full adult franchise in proposals for Federation. For the first eighty-five years of responsible government voting for both Houses of Parliament was voluntary but the Electoral Act Amendment Act of 1942 made voting for the House of Assembly compulsory for persons whose names appear on the House of Assembly Electoral Roll.

### Number of Members and Electorates

Alterations made to the number of members and number of electorates for each of the two Houses are shown in the following table.

**Members and Electorates, South Australia**

Date	Legislative Council		House of Assembly	
	Members	Electorates	Members	Electorates
1856 .....	18	1	36	17
1863 .....	18	1	36	18
1875 .....	18	1	46	22
1882 .....	24	4	46	22
1884 (a) .....	24	4	52	26
1890 .....	24	4	54	27
1902 .....	18	4	42	13
1912 (b) .....	18	4	40	12
1915 .....	20	5	46	19
1938 .....	20	5	39	39
1970 .....	20	5	47	47
1975 .....	21	1	47	47
1979 .....	22	1	47	47

(a) Separate representation for Northern Territory.

(b) Cession of Northern Territory to Commonwealth Government control.

### Functions of Parliament

The function of Parliament is to legislate for the peace, order, and good government of the State. Principal among the tasks of Parliament is the raising of revenue and the

appropriation of funds for the development and maintenance of the State through its public services.

Legislation may be initiated by any member in either House except that money Bills must be initiated by Ministers of the Crown in the House of Assembly; the Legislative Council may suggest amendments to money Bills although it may not effect such amendments itself. Most Bills are initiated by the Government as a result of the deliberations of Cabinet. The Opposition and Independent members usually confine their activities to examination, criticism, and amendment, of Government measures. Legislation, other than to amend the Constitution, may be passed by a simple majority of the votes of the members present.

### **Constitutional Amendment**

Alteration to the Constitution Act is in the hands of the Parliament. An alteration to the Constitution requires at the second and third readings of the Bill acceptance by a majority of all the members (not only those present or voting) of each House voting separately.

### **Deadlocks**

A deadlock results from the refusal by the Upper House to pass the same (or substantially the same) Bill during two consecutive Parliaments, provided that a general election for the Lower House has been held between the refusals and that on the second occasion an absolute majority of all the members of the Lower House voted in favour of the Bill at its second and third readings. In the event of a deadlock between the Houses, provision is made for the dissolution of both Houses.

### **Life of Parliament**

Term of office of each Parliament is generally three years from the day on which it first meets for the dispatch of business but it may be prorogued or dissolved by the Governor before the expiration of this period.

### **Salaries and Allowances**

Salaries and allowances for members of Parliament are determined periodically by the Parliamentary Salaries Tribunal, pursuant to the provisions of the Parliamentary Salaries and Allowances Act, 1965-1984.

The annual salary at 1 January 1985 is \$37 500 per member with allowances of between \$7 785 and \$28 800 depending on the area of the member's electorate and the distance from the City of Adelaide. The following additional payments are also made:

Premier and Treasurer—\$43 555 plus expense allowance of \$5 400.

Deputy Premier—\$30 595 plus expense allowance of \$4 485.

Leader of the Government in the Legislative Council—\$26 620 plus expense allowance of \$4 255.

Other Ministers—\$25 075 plus expense allowance of \$3 740.

President of Legislative Council and Speaker of House of Assembly—each \$21 000 plus expense allowance of \$2 115.

Chairman of Committees, House of Assembly—\$10 500 plus expense allowance of \$1 060.

Leader of the Opposition, House of Assembly—\$25 075 plus expense allowance of \$3 740.

Leader of the Opposition, Legislative Council—\$9 680 plus expense allowance of \$1 185.

Deputy Leader of the Opposition, House of Assembly—\$9 680 plus expense allowance of \$1 185.

Government Whip—\$6 890.

Opposition Whip—\$6 890.

In addition allowances are paid to the members of the various Parliamentary Committees.

### Superannuation

All members are required to contribute to a Superannuation Fund established under the Parliamentary Superannuation Act, 1974-1982, which provides for the payment of superannuation pensions to persons, or widows or widowers or eligible children of persons, who have served as members of the State Parliament. Members qualify for a pension after fifteen years service, or after thirteen years service in five Parliaments, but can also qualify for a pension after six years service if they retire involuntarily or are over sixty years of age.

Every member is required to contribute 11·5 per cent of his salary, including additional salary received as a Minister, officer of Parliament or member of a Parliamentary Committee. According to the length of service the pension payable to ordinary members varies between 41·2 per cent of basic salary (presently \$15 450 a year) and 75 per cent of basic salary (presently \$28 125 a year). Greater amounts of pension accrue to those members who have made additional contributions based on additional salary as a Minister or an office holder. Pensions are increased or decreased on 1 October each year in accordance with the increase or decrease in the Consumer Price Index for the preceding year ending 30 June.

At 30 June 1984 there were seventy-six contributors to the fund; forty-eight ex-members, twenty-seven widows and one child were in receipt of pensions.

### Cost of Parliamentary Government

The following table shows, in broad groups, the expenditure incurred in the operation of the parliamentary system in South Australia, comprising the Governor, the Ministry, the Legislative Council, House of Assembly and electoral activities.

**Cost of Parliamentary Government, South Australia**

Particulars	1981-82	1982-83	1983-84
		\$'000	
Governor's Establishment .....	643	679	641
Ministry .....	829	846	904
Parliament:			
Legislative Council(a) .....	1 106	1 213	1 295
House of Assembly(a) .....	2 116	2 292	2 564
Other(b) .....	5 524	6 265	7 546
Total Parliament .....	8 746	9 770	11 405
Electoral .....	502	1 853	651
Royal Commissions, Select Committees, etc. ....	109	107	119
Total .....	10 829	13 254	13 720

(a) Allowances to members, travelling and other expenses.

(b) Government contribution to members' superannuation funds, printing, reporting staff, library, etc.

### LEGISLATIVE COUNCIL

#### Members and Electorates

Before the passing of the Constitution and Electoral Acts Amendment Act, 1973 each member of the Legislative Council, in addition to fulfilling the general requirements mentioned on page 70, must have attained the age of thirty years, have been a British



subject, and have resided in the State for at least three years. For the purpose of electing members to the Council, the State was divided into five electorates each having four members. Each electorate normally elected two members every three years, and each member occupied his seat for a minimum of six years. When a casual vacancy occurred because of the death, resignation or disqualification of a member, such a casual vacancy was filled, at a by-election in the particular electorate, for the unexpired portion of the previous member's term.

The Constitution and Electoral Acts Amendment Act, 1973, assented to on 22 November 1973, increased the number of members in the Legislative Council from twenty to twenty-two and reduced the number of electorates to one with the whole State becoming a single electorate with members elected on a proportional representation basis. This amendment did not become fully effective for two general elections as only half the Legislative Councillors retire at each election and eleven members (not ten as previously) are now elected at each general Legislative Council election. At the general election of 15 September 1979, eleven members were elected to the Legislative Council and at present there are twenty-two members in this House. In future casual vacancies will be filled by a person chosen at a joint sitting of the members of the Legislative Council and House of Assembly.

### **Franchise**

Voting for the Legislative Council is voluntary for those persons whose names are on the Legislative Council Electoral Roll. Under the Constitution and Electoral Acts Amendment Act, 1973, all names which appear on the House of Assembly Electoral Roll are included on the Legislative Council Electoral Roll. Thus, all electors entitled to vote at House of Assembly elections are entitled also to vote at Legislative Council elections. Qualifications for House of Assembly electors are discussed below.

### **President and Chairman of Committees**

At the first meeting of the Council in each Parliament the members choose one from among their number to fill the position of President and Chairman of Committees. The person so elected is then entitled to a casting vote only.

## **HOUSE OF ASSEMBLY**

### **Seat of Government**

The House of Assembly can be regarded as the more important Chamber in that the Government of the day holds its position as such only so long as it controls a majority in this House. When it no longer controls such a majority in vital issues, particularly 'money Bills', the Government must resign or go to the polls. Once defeated in the Lower House on a 'money Bill', the Government is unable to finance the administration of the State.

### **Franchise**

An Australian citizen, or a British subject who on 25 January 1984 was enrolled on a Commonwealth electoral roll and/or at some time between 26 October 1983 and 25 January 1984 inclusive was enrolled on an electoral roll for a South Australian Assembly district or a Commonwealth electoral roll in any State, and at least eighteen years of age who:

- (i) has lived continuously in Australia for at least six months, and in South Australia for at least three months, and in a Subdivision for at least one month immediately preceding the date of his or her claim for enrolment; or

(ii) is or has been (as qualified by the Constitution Act) a member of the Commonwealth Naval, Military or Air Force, or a member of the Mercantile Marine, during any war in which the Commonwealth is or has been engaged; is entitled to vote at an election for a Member of the House of Assembly if, at the time of the election, he or she is enrolled on the electoral roll for a Subdivision of the Assembly District in which the election is held, and is not of unsound mind.

Persons convicted of an offence punishable with imprisonment for one year or more and persons attainted of treason are entitled to the same voting rights as ordinary citizens under the provisions of the Constitutional Act Amendment Act, 1976.

Enrolment for the House of Assembly is not compulsory but in practice, as a consequence of the operation of the Commonwealth and House of Assembly Joint Electoral Rolls, most persons enrolling for the Commonwealth Electoral Roll are also enrolled for the House of Assembly.

### **Membership**

Subject to the exclusions mentioned on page 70 election to the House of Assembly is open to those eligible to vote in an election for the House. Members of this House are elected for a maximum of three years, for single-member districts. The seat of a member becomes vacant through his death, resignation or disqualification and, usually, is filled at a by-election.

### **Electorates and Electoral Distribution**

The present allocation of thirty-three metropolitan and fourteen country electorates for the House of Assembly became operative from 23 August 1977 and was determined by the Electoral Districts Boundaries Commission. Before this date there were twenty-eight metropolitan and nineteen country House of Assembly electoral districts. The first election incorporating the present boundaries was held on 17 September 1977.

The Commission, constituted by the Constitution Act Amendment Act (No. 5), 1975, differs from previous commissions for redistribution of electoral boundaries in that each of those commissions was created by the Parliament to make a single report and recommendation to the Parliament. The boundaries so recommended did not become effective unless the recommendation was approved by the Parliament. However, the present Commission has perpetual succession and a common seal as a corporate entity. The reports made by the Commission do not require validating legislation and become operative three months after publication of the Commission's Order.

Under the Act any elector may, within one month of the Commission's Order, appeal to the Full Court of the Supreme Court.

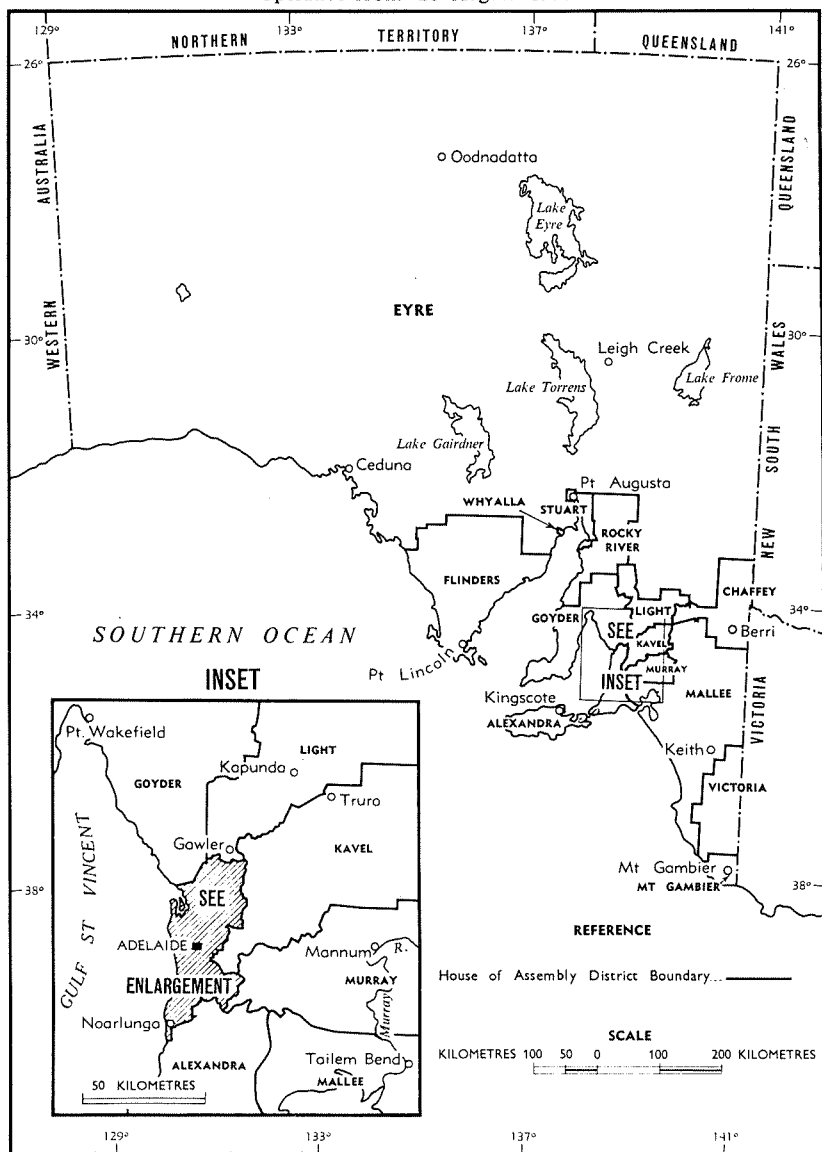
### **Officers and their Functions**

A Speaker presides over the House, and his election is the first business when a Parliament first meets. He presides over debate, maintains order, represents the House officially, communicates its wishes and resolutions, defends its privileges when necessary, and applies its procedure. The Speaker may exercise a casting vote only. There is also a Chairman of Committees elected by the House at the beginning of each Parliament; he presides over the deliberations of the House in Committee and acts as Deputy Speaker when required.

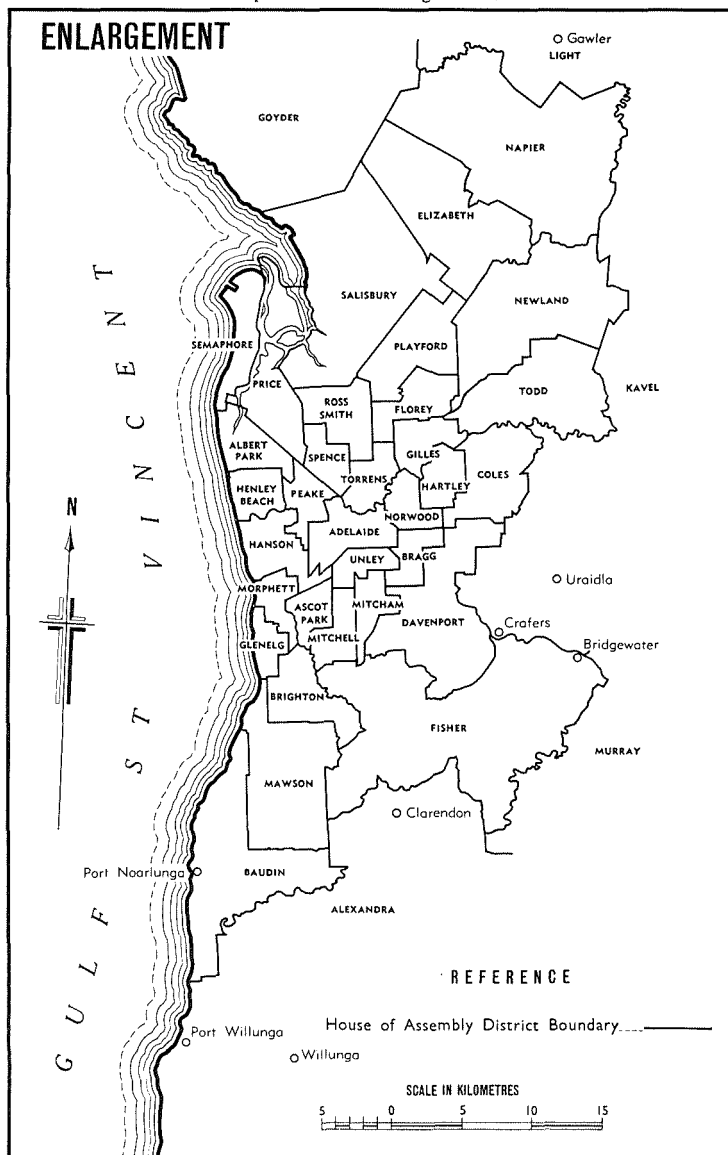
Other officers of the Parliament include the Leader and Deputy Leader of the Opposition in either House and the various party whips whose function is to ensure that their party members are present in the House for divisions and other important business.

# SOUTH AUSTRALIA SOUTH AUSTRALIAN ELECTORAL DISTRICTS

Operative from 23 August 1977



PORTION OF SOUTH AUSTRALIA  
**SOUTH AUSTRALIAN ELECTORAL DISTRICTS**  
 Operative from 23 August 1977



## ELECTIONS AND PARTY REPRESENTATION

The following table gives details of the numbers of electors enrolled and voting in contested electorates for all general elections from 1953 to 1982.

## South Australian Parliament: Voting at Elections, 1953 to 1982

Date	Legislative Council			House of Assembly		
	Contested Electorates			Contested Electorates		
	Electors Enrolled	Electors Voting	Per Cent	Electors Enrolled	Electors Voting	Per Cent
7 March 1953 .....	97 968	79 373	81.02	354 273	336 529	95.00
3 March 1956 .....	22 963	16 002	69.69	299 048	280 811	93.90
7 March 1959 .....	86 278	70 007	81.14	426 340	400 531	93.95
3 March 1962 .....	118 218	98 786	83.56	444 197	417 462	93.98
6 March 1965 .....	186 899	149 910	80.21	542 436	513 064	94.59
2 March 1968 .....	275 701	262 328	95.15	609 626	575 948	94.48
30 May 1970 .....	...	...	...	635 533	603 952	95.03
10 March 1973 .....	383 758	357 971	93.28	696 290	655 937	94.20
12 July 1975 .....	771 414	719 753	93.30	771 414	721 770	93.56
17 September 1977 .....	...	...	...	818 335	764 072	93.37
15 September 1979 .....	826 586	765 033	92.55	826 586	768 985	93.03
6 November 1982 .....	871 225	808 503	92.80	871 225	811 783	93.18

The following table shows the Party representation in both Houses of the South Australian Parliament resulting from each general election from 1953.

## South Australian Parliament: Party Representation at Elections, 1953 to 1984

Date	Legislative Council			House of Assembly		
	ALP	LP	Other	ALP	LP	Other
7 March 1953 .....	4	16	—	14	21	4
3 March 1956 .....	4	16	—	15	21	3
7 March 1959 .....	4	16	—	17	20	2
3 March 1962 .....	4	16	—	19	18	2
6 March 1965 .....	4	16	—	21	17	1
2 March 1968 .....	4	16	—	19	19	1
30 May 1970 .....	4	16	—	27	20	—
10 March 1973 .....	6	13	1	26	18	3
12 July 1975 .....	10	9	2	23	20	4
17 September 1977 .....	10	11	—	27	18	2
15 September 1979 .....	10	11	1	19	25	3
6 November 1982 .....	9	11	2	24	21	2
1 December 1984 (a) .....	9	11	(b) 2	23	21	(c) 3

(a) By-election (b) Australian Democrats (c) 1 National Party, 2 Independents  
ALP Australian Labor Party LP Liberal Party of Australia

At the general election held on 6 November 1982 there were forty-seven electorates represented in the House of Assembly, thirty-three metropolitan and fourteen country. The table below shows the electoral returns for that general election.

## House of Assembly: Party Representation, 1982

Electorate	Electors on Roll	Electors Voting	Successful Candidate		
			Name	Party	Preference Votes
Metropolitan:					
Adelaide .....	16 147	14 361	Wright, J. D.	ALP	7 888
Albert Park .....	19 931	18 751	Hamilton, K. C.	ALP	11 012
Ascot Park .....	16 749	15 795	Trainer, J. P.	ALP	8 409
Baudin .....	23 718	22 149	Hopgood, D. J.	ALP	12 802
Bragg .....	16 261	15 176	Tonkin, D. O.	LP	9 177
Brighton .....	19 881	18 742	Appleby, J. E.	ALP	8 486
Coles .....	19 838	18 797	Adamson, J. L.	LP	8 470
Davenport .....	19 040	17 615	Brown, D. C.	LP	12 133
Elizabeth .....	20 151	18 510	Duncan, P.	ALP	10 896
Fisher .....	24 057	22 592	Evans, S. G.	LP	11 436
Florey .....	18 125	16 985	Gregory, R. J.	ALP	9 213
Gilles .....	16 920	15 852	Slater, J. W.	ALP	8 120
Glenelg .....	17 031	15 863	Mathwin, J.	LP	9 110
Hanson .....	17 929	16 625	Becker, H.	LP	8 720
Hartley .....	19 651	18 195	Groom, T. R.	ALP	8 734
Henley Beach .....	19 220	18 122	Ferguson, D. M.	ALP	8 782
Mawson .....	24 988	23 636	Lenahan, S. M.	ALP	11 968
Mitcham .....	16 948	15 759	Baker, S. J.	LP	7 759
Mitchell .....	17 698	16 448	Payne, R. G.	ALP	8 971
Morphett .....	16 993	15 719	Oswald, J. K. G.	LP	7 346
Napier .....	18 740	16 922	Hemmings, T. H.	ALP	9 862
Newland .....	24 547	23 179	Klunder, J. H. C.	ALP	11 120
Norwood .....	17 722	16 008	Crafter, G. J.	ALP	8 510
Peake .....	16 944	15 732	Plunkett, K. H.	ALP	8 837
Playford .....	20 308	18 921	McRae, T. M.	ALP	10 391
Price .....	15 813	14 875	Whitten, G. T.	ALP	8 753
Ross Smith .....	16 160	14 911	Bannon, J. C.	ALP	10 200
Salisbury .....	23 282	21 602	Arnold, L. M. F.	ALP	13 632
Semaphore .....	19 080	17 826	Peterson, N. T.	IND	7 915
Spence .....	15 241	14 138	Abbott, R. K.	ALP	9 866
Todd .....	20 798	19 732	Ashenden, E. S.	LP	8 664
Torrens .....	16 914	15 285	Wilson, M. M.	LP	7 602
Unley .....	16 595	15 267	Mayes, M. K.	ALP	7 704
Country:					
Alexandra .....	20 194	19 097	Chapman, W. E.	LP	10 519
Chaffey .....	19 126	17 594	Arnold, P. B.	LP	10 219
Eyre .....	15 542	13 849	Gunn, G. McD.	LP	7 977
Flinders .....	16 587	15 652	Blackier, P. D.	NP	8 106
Goyder .....	17 426	16 358	Meier, E. J.	LP	9 468
Kavel .....	19 268	18 013	Goldsworthy, E. R.	LP	10 878
Light .....	16 946	16 082	Eastick, B. C.	LP	9 553
Mallee .....	15 858	15 019	Lewis, I. P.	LP	8 374
Mount Gambier..	18 617	17 533	Allison, H.	LP	8 444
Murray .....	19 116	18 016	Wotton, D. C.	LP	9 959
Rocky River .....	17 415	16 485	Olsen, J. W.	LP	8 943
Stuart .....	17 947	16 844	Keneally, G. F.	ALP	10 403
Victoria .....	15 998	15 080	Rodda, W. A.	LP	8 023
Whyalla .....	17 751	16 071	Brown, M. J.	ALP	7 356

ALP Australian Labor Party

LP Liberal Party of Australia

NP National Party

IND Independent

At a by-election held on 14 May 1983, the seat of Bragg was won by Mr G.A. Ingerson.  
At a by-election held on 1 December 1984, the seat of Elizabeth was won by Mr M.J. Evans (Independent).

*Speaker* : The Hon. T. M. McRae, MP

*Chairman of Committees* : M. J. Brown, MP

*Leader of the Opposition* : J. W. Olsen, MP

*Deputy Leader of the Opposition* : E. R. Goldsworthy, MP

*Government Whip* : J. P. Trainer, MP

*Opposition Whip* : S. G. Evans, MP

*Clerk of the House of Assembly* : G. D. Mitchell

The members of the Legislative Council after the general election of 6 November 1982 were as follows:

Blevins, Hon. F. T. (ALP)

Bruce, Hon. G. L. (ALP)

Burdett, Hon. J. C. (LP)

Cameron, Hon. M. B. (LP)

Chatterton, Hon. B. A. (ALP)

Cornwall, Hon. J. R. (ALP)

Creedon, Hon. C. W. (ALP)

Davis, Hon. L. H. (LP)

DeGaris, Hon. R. C. (LP)

Dunn, Hon. H. P. K. (LP)

Feleppa, Hon. M. S. (ALP)

Gilfillan, Hon. I. (AD)

Griffin, Hon. K. T. (LP)

Hill, Hon. C. M. (LP)

Laidlaw, Hon. D. V. (LP)

Levy, Hon. J. A. W. (ALP)

Lucas, Hon. R. I. (LP)

Milne, Hon. K. L. (AD)

Ritson, Hon. R. J. (LP)

Sumner, Hon. C. J. (ALP)

Whyte, Hon. A. M. (LP)

Wiese, Hon. B. J. (ALP)

*President and Chairman of Committees* : Hon. A. M. Whyte, MLC

*Leader of the Opposition* : Hon. M. B. Cameron, MLC

*Clerk of the Legislative Council* : C. H. Mertin

### **Court of Disputed Returns**

In South Australia, provision is made in the Electoral Act, 1929-1982, for the constitution of a Court of Disputed Returns which has jurisdiction to hear and determine all questions of disputed returns affecting either House of the State Parliament which are referred to it by the House concerned. No return on an election writ may be disputed, except by a petition to this Court. A subsidiary function of the Court is to hear petitions for exoneration from liability for failure to file certain electoral returns or vouchers under Part XIV of the Electoral Act.

The Court is constituted by the senior puisne Judge of the Supreme Court, or where he is not available by the puisne Judge next in order of seniority who is available.

The Court sits as an open court, usually at Parliament House, Adelaide, and has power, *inter alia* :

- to compel the attendance of witnesses and the production of documents;
- to examine witnesses upon oath;
- subject to any Supreme Court rules, to regulate the form and mode of its own proceedings;
- to declare that any person who was returned as elected was not duly elected;
- to declare any candidate duly elected who was not returned as elected;
- to declare any election void;
- to dismiss or uphold any petition in whole or in part;

- to award any costs; and to punish any contempt of its authority.

Most cases have related to House of Assembly elections. Since 1857, the Court of Disputed Returns has considered twenty-two petitions referred to it by the House of Assembly concerning the election of twenty-seven members of that House. The Court's decisions in these cases are summarised hereunder:

Election voided and member unseated .....	16
Member unseated but other candidate declared to be duly elected .....	2
Petitions unsuccessful .....	2
Petitions dismissed .....	6
Petition withdrawn .....	1

### REFERENDA

Since the inception of responsible government in South Australia in 1856 eight referenda have been held—the first in 1896 and subsequent ones in 1898, 1899, 1911, 1915, 1965, 1970 and 1982—and eleven proposals have been submitted.

Three proposals related to education (1896) of which only one was approved; three were constitutional (1898 and 1899)—all approved; one related to Parliamentary salaries (1911)—not approved; one related to bar-room closing hours (1915)—favoured 6 p.m. closing; one related to the establishment of a lottery (1965)—approved; one related to extended shopping hours in the metropolitan area (1970)—not approved; and one related to daylight saving (1982)—approved. The last referendum, held on 6 November 1982, asked House of Assembly electors 'Are you in favour of daylight saving?'. Of the 811 288 who voted, 568 635 voted 'Yes' and 225 310 voted 'No'.

### ADMINISTRATION

The South Australian Public Service consists of thirty-four departments.

#### PREMIER, TREASURER, MINISTER OF STATE DEVELOPMENT AND MINISTER FOR THE ARTS

Hon. John Charles Bannon, MP

Department of the Premier and Cabinet	Treasury Department Department of State Development
Department of the Public Service Board	Department for the Arts

#### DEPUTY PREMIER, MINISTER OF LABOUR, CHIEF SECRETARY AND MINISTER OF EMERGENCY SERVICES

Hon. John David Wright, MP

Department of Labour	Auditor-General's Department Police Department
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#### ATTORNEY-GENERAL, MINISTER OF CONSUMER AFFAIRS, MINISTER OF CORPORATE AFFAIRS AND MINISTER OF ETHNIC AFFAIRS

Hon. Christopher John Sumner, MLC

Attorney-General's Department Courts Department Electoral Department	Department of Public and Consumer Affairs Department of the Corporate Affairs Commission
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**MINISTER FOR ENVIRONMENT AND PLANNING, MINISTER OF LANDS AND  
MINISTER OF REPATRIATION****Hon. Donald Jack Hopgood, MP**Department of Environment and  
PlanningDepartment of Lands  
Department of Services and Supply**MINISTER OF TRANSPORT AND MINISTER OF MARINE****Hon. Roy Kitto Abbott, MP**Department of Transport  
Highways Department

Department of Marine and Harbors

**MINISTER OF HEALTH****Hon. John Robert Cornwall, MLC**

South Australian Health Commission

**MINISTER OF EDUCATION AND MINISTER OF TECHNOLOGY****Hon. Lynn Maurice Ferguson Arnold, MP**

Education Department

Department of Technical and  
Further Education**MINISTER OF TOURISM AND MINISTER OF LOCAL GOVERNMENT****Hon. Gavin Francis Keneally, MP**

Department of Tourism

Department of Local Government

**MINISTER OF MINES AND ENERGY****Hon. Ronald George Payne, MP**

Department of Mines and Energy

**MINISTER OF COMMUNITY WELFARE AND MINISTER OF ABORIGINAL  
AFFAIRS****Hon. Gregory John Crafter, MP**

Department for Community Welfare

**MINISTER OF WATER RESOURCES AND MINISTER OF RECREATION AND  
SPORT****Hon. John William Slater, MP**Engineering and Water Supply  
DepartmentDepartment of Recreation and  
Sport**MINISTER OF HOUSING AND CONSTRUCTION AND MINISTER OF PUBLIC  
WORKS****Hon. Terence Henry Hemmings, MP**

Department of Housing and Construction

**MINISTER OF AGRICULTURE, MINISTER OF FISHERIES, MINISTER OF  
FORESTS AND MINISTER OF CORRECTIONAL SERVICES****Hon. Frank Trevor Blevins, MLC**Department of Agriculture  
Department of FisheriesWoods and Forests Department  
Department of Correctional Services

### SUPREME COURT JUDGES

Judges of the Supreme Court are appointed by commission of the Governor on the advice of the Executive Council. A person may not be appointed a judge of the Supreme Court unless he is a legal practitioner of ten years standing. Judges of the Supreme Court at 31 December 1984 were:

Hon. Leonard James King (Chief Justice)	Hon. Roderick Grant Matheson
Hon. Howard Edgar Zelling, CBE	Hon. Derek Willoughby Bollen
Hon. William Andrew Noye Wells	Hon. Robin Rhodes Millhouse
Hon. Samuel Joshua Jacobs, AO	Hon. Elliott Frank Johnston
Hon. James Michael White	Hon. Graham Clifton Prior
Hon. Christopher John Legoe	Hon. Leslie Trevor Olsson
Hon. Brian Rothwell Cox	Hon. Maurice Francis O'Loughlin
Hon. Robert Finney Mohr	

### THE OMBUDSMAN

The office of the Ombudsman is established under the Ombudsman Act, 1972-1984. The Ombudsman, Ms Mary Beasley, is empowered to investigate complaints from members of the public concerning the administrative acts of State Government departments, State statutory authorities and local government councils. The jurisdiction of the Ombudsman does not extend to Commonwealth Government departments or authorities, judicial decisions, police actions, or actions by individuals or companies.

A complaint to the Ombudsman is usually made by the person or enterprise directly affected by an administrative act, although, a Member of the South Australian Parliament or some other person may act on his behalf. Complaints may be made by telephone or personal visit, but it is preferable for a complaint to be in writing giving full details including copies of any correspondence with the authority concerned.

The Ombudsman has the powers of a royal commission but conducts his investigations in private. Complainants are informed of the final result of any inquiry and where appropriate progress reports are given while an investigation is proceeding. The Ombudsman service is provided free-of-charge.

During 1983-84, 824 complaints were registered and of those fully investigated, approximately 28 per cent were found to be justified fully or in part.

### LEGISLATION

During 1984, 107 Public Acts were passed by the forty-fifth South Australian Parliament. Details of some of the more important legislation passed during this period are given below.

Aboriginal Lands Trust Act Amendment Act, 1984 (No. 65) enables any Aboriginal community occupying lands owned by the Aboriginal Lands Trust to invoke powers to deal with persons who are intoxicated.

Adelaide Railway Station Development Act, 1984 (No. 31) facilitates the development of the site of the Adelaide Railway Station by the construction of a hotel of international standard, an office tower and other improvements.

Australian Formula One Grand Prix Act, 1984 (No. 97) establishes a corporation to be known as the 'Australian Formula One Grand Prix Board', and defines its powers and functions.

Criminal Investigation (Extraterritorial Offences) Act, 1984 (No. 75) provides for the issue of search warrants for the investigation in this State of certain offences against the law of other States or Territories.

Equal Opportunity Act, 1984 (No. 95) provides that certain kinds of discrimination and certain behaviour are unlawful.

Family Relationships Act Amendment Act, 1984 (No. 102) ensures that a child conceived following use of fertilisation procedures of artificial insemination by donor and *in vitro* fertilisation using donor gametes will be the child of the couple who have consented to the procedure.

Maralinga Tjarutja Land Rights Act, 1984 (No. 3) provides for the vesting of title of certain lands known as the Maralinga lands in the people who are acknowledged as the traditional owners.

National Crime Authority (State Provisions) Act, 1984 (No. 91) provides for the operation of the National Crime Authority in South Australia.

Public Intoxication Act, 1984 (No. 47) abolishes the offence of public drunkenness.

Racing Act Amendment Act (No. 2), 1984 (No. 71) amends the principal Act to permit the practice of cross-code betting, empowers the Betting Control Board to revoke a bookmaker's permit and, where a registered racing club is unable to hold races on a particular day, authorises the club (with the Minister's permission) to conduct on-course totalisator betting on that day on other race meetings.

### OVERSEAS REPRESENTATION

South Australia is represented in London by the Agent-General for South Australia, at South Australia House, 50 Strand, London. As official representative of the State, it is the function of the Agent-General to work in close co-operation with the High Commissioner for Australia, to keep the State Government informed of political and economic developments overseas, to promote industrial development and investment in South Australia, to encourage immigration to the State and to foster trade with the United Kingdom and other countries.

### INTERSTATE REPRESENTATION

The South Australian Tourist Bureau maintains offices at 131-133 King Street, Sydney, NSW, and at 25 Elizabeth Street, Melbourne, Victoria, to foster and facilitate tourist travel to South Australia.

### CONSULAR REPRESENTATIVES

There are 21 countries represented in South Australia by consuls, vice-consuls, consular-agents or consuls-general.

*Austria:* Dr Peter E. Steidl, Consul

*Belgium:* The Hon. Dr. David O. Tonkin, Consul

*Denmark:* John G. Branson, Consul

*Dominican Republic:* Peter H. D. Lathlean, Consul

*Finland:* Colin C. Verco, OBE, Consul

*France:* Dr Rex J. Lipman, Consul

*Germany:* Sir Bruce R. Macklin, OBE, Consul

*Greece:* Constantin Karabetsis, Consul-General <sup>(a)</sup>

*Italy:* Dr. Gianni Martini, Consul <sup>(a)</sup>

*Japan:* J. Langdon Parsons, AM, Consul-General

*Liberia:* William B. Coombs, Consul

*Malaysia:* Mohd. Ghazali bin Shuib, Consul <sup>(a)</sup>

*Mexico:* Robert W. Clampett, AM, Consul

*Netherlands:* Willem Ouwens, Consul

*Norway:* John N. Howe, Consul

*Philippines:* T. Peter Fowler, Consul-General

*Portugal:* Raymond F. Walters, Consul

*Sweden:* Ms. June S. Tanner, Consul

*Switzerland:* Paul A. Richter, Consul

*Thailand:* Mrs Joan M. Walton, OAM, Consul-General

*United States of America:* William J. McGovern, Consular-Agent <sup>(a)</sup>

(a) *Consul de Carriere.*

### STATE EMBLEMS

A description of the South Australian Coat-of-Arms, the State Badge, the State Flag and the Floral Emblem together with coloured illustrations was included on pages 94-5 of the *South Australian Year Book* 1970.

On 27 September 1970, the hairy-nosed wombat (*Lasiorhinus latifrons*) was adopted as South Australia's official Faunal Emblem.

## 3.4 PUBLIC CORPORATIONS

A public corporation is defined, for statistical purposes, as a body (other than a local government authority or body whose receipts and payments are included in the public accounts of the Commonwealth, a State, or a Territory) created by or under legislation to carry out an activity or activities on behalf of a Government, or a body in which a Government has a controlling interest.

Some authorities, such as marketing boards which are set up by Acts of Parliament are not regarded as public corporations because their activities are carried out on behalf of industries rather than on behalf of any Government. Most public corporations have independent powers for the recruitment of staff. All possess greater administrative and financial autonomy than government departments but there is a wide variation in the degree of autonomy accorded, in various aspects, to different authorities.

Activities carried out by public corporations include tertiary education, hospital services, power supply, public transport, banking services, fire control, irrigation and drainage in rural areas, control and regulation of milk supply, slaughtering of animals for human consumption, housing development, off-course totalisators and lotteries, and investigation of problems relating to the development of mineral resources.

In appropriate parts of this Year Book reference is made to the activities of most of the public corporations which operate in South Australia.

## 3.5 LOCAL GOVERNMENT

### LOCAL GOVERNMENT AUTHORITIES

#### Local Government Areas: Number, Size and Status

At 1 January 1985, there were 124 Councils in South Australia. This was a reduction of one from the previous year and followed a select committee investigation into the boundaries of the townships of Moonta and Wallaroo, and the District Council of Kadina, which now combine to form the new District Council of Northern Yorke Peninsula.

Each local government area is controlled by a Council consisting of members elected by residents and property owners and exercising powers under the Local Government Act, 1934-1985.

Whilst around 99 per cent of the State's population resides within the 124 incorporated areas, only 15 per cent of the State is covered by such—the remaining parts are served by the Outback Areas Community Development Trust, and within Coober Pedy, the Coober Pedy Progress and Miners Association. Both of these organisations are described later in more detail.

### **Local Government Boundaries**

Local government areas are defined by proclaimed boundaries. The Local Government Act, 1934-1985 stipulates that a change to boundaries can be made in the form of a proposal initiated by the Minister of Local Government, a Council or twenty per cent of the electors in the area or portion of the area affected by the proposal. The proposal is reviewed by the Local Government Advisory Commission which undertakes enquiries and hearings into the subject and makes recommendations to the Minister. The other major boundary of concern to local government bodies involves wards which are also defined by proclamation. All except four government areas contain wards which are primarily electoral districts. The ward boundary is subject to a periodical review within a time constraint of seven years to ensure that electors are adequately and fairly represented.

### **The Local Government Advisory Commission**

The newly constituted Local Government Advisory Commission was formed by an amendment to the Local Government Act in 1984. The Commission supersedes a body which was formed in 1976. The Commission comprises a Chairman who must be a legal practitioner of not less than seven years standing; representatives from the Local Government Association of South Australia, and United Trades and Labor Council of South Australia; a person with experience in Local Government nominated by the Minister; and the Director, Department of Local Government.

The Commission has the powers of a Royal Commission and is required to undertake enquiries and hold hearings on a variety of matters which affect local government and which have been referred by the Minister of Local Government for advice and recommendation.

### **Functions of Local Government**

The Local Government Act, 1934-1985 prescribes most of the powers and authorities which each council exercises in the management of the affairs of its area, but some functions devolve from other Acts. To enable it to sue and be sued and to participate in transactions involving the purchase and sale of land and other property each council is constituted as a corporate body.

The functions performed by councils vary with the area concerned, but there are general functions which are common to them all. Many of these receive more detailed attention in the parts of this book dealing with the appropriate subjects, *e.g.* road construction and maintenance in Part 8·3 Roads; health services and Local Boards of Health in Part 6·5 Health; and libraries in Part 6·4 Culture and Recreation. Among the many other functions of local government authorities are the provision of street lighting, the maintenance of cemeteries, foreshores and jetties, the control of the location of industries, the prevention of fires within certain areas, and the policing of provisions relating to vermin and weeds.

### **Local Government Finance**

Local government authorities derive their revenue from many different sources, including sundry licences and fines, but the principal sources are rates, loans raised against the security of future rates, and government grants. The relative importance of these sources of revenue varies between areas and through time, within areas.

Specific purposes Commonwealth Government grants, generally, are not made direct to local government authorities but are administered by appropriate State Government departments. The most important example of this is the distribution of a portion of Commonwealth Aid Roads Grants to local government authorities, by the Highways Department following decisions made by the Local Roads Advisory Committee.

The Commonwealth Government makes available to the States (for sharing by local government authorities) an agreed percentage of income tax collected by the Commonwealth Government and must include an approved distribution on a *per capita* basis with the balance distributed on an equalisation basis. South Australia is making 30 per cent of the State amount available to local government authorities on a *per capita* basis.

The State Government provides funds and subsidies to local government for public libraries, recreation centres and facilities, public parks, caravan parks, effluent and stormwater drainage, and roads.

A large proportion of local government expenditure from both loan funds and other revenue is for the construction and maintenance of roads, footpaths, and stormwater drains. Further information is contained in Part 11·4 Local Government Finance.

### **South Australian Local Government Grants Commission**

This body is a statutory authority established under the South Australian Local Government Grants Commission Act, 1976. The primary function of the Commission is to make recommendations to the Minister on the allocation to councils in South Australia of grants from the Commonwealth Government for local government purposes under the provisions of the Commonwealth *Local Government (Personal Income Tax Sharing) Act, 1976*. The Commonwealth Act provides that two per cent of net personal income tax receipts are provided to local government as untied grants. In 1983-84 the amount distributed to councils in South Australia was \$39 507 443. Further details of the basis for the distribution between councils are contained in Part 11·4 Local Government Finance.

### **Local Government Finance Authority**

The Local Government Finance Authority Act, 1983, was proclaimed on 26 January 1984. The Local Government Finance Authority has as its primary functions the task of borrowing on behalf of councils contracting through the Authority, and investing cash surplus funds in the short term money market in a similar manner to interstate organisations.

All local authorities are automatically members of the Finance Authority. However, active participation in the Authority is completely a matter for each individual council to decide.

A Board of Trustees supervises the operation of the Authority and consists of two members elected by the Annual Meeting of the Local Government Finance Authority, two members appointed by the Local Government Association, the Secretary-General of the Local Government Association, and nominees of the Under Treasurer and the Director of the Department of Local Government.

### **Local Government Membership**

The Local Government electorate is represented by a membership which comprises a mayor or chairman, aldermen and councillors. The mayor or chairman is the principal

member of the Council. A mayor is elected by the area as a whole whilst the chairman is chosen from amongst the members of the council. The mayor of the City of Adelaide is entitled to be called Lord Mayor. Aldermen are the representatives of the area as a whole and there may not be more aldermen than half the number of councillors. Councillors are elected by the electors of the area as representatives of the area as a whole where there are no wards and in the case where wards exist, by the electors of those individual wards as ward representatives. No ward may have more than four councillors.

#### *Eligibility*

A person is eligible to nominate for local government office if he is an elector for the area, provided that he is not an undischarged bankrupt, liable to imprisonment, disqualified from holding public office, or an officer or employee of the Council. Furthermore, members of other councils and persons who have nominated for offices in other councils are ineligible. A person elected to the office of mayor or alderman must have been a member of a council for at least twelve months.

#### *Allowances and interest*

A member of a Council receives an annual allowance for expenses and reimbursement of other prescribed expenses. The allowances are fixed at the first meeting after an election and may not be less than \$300 per annum or more than \$1 200 per annum.

There are times when it is possible that a conflict of interest may occur in a member's duties. The basic test is whether the member or a person closely associated with him would obtain a direct or indirect benefit or suffer a direct or indirect detriment if the matter before the council were decided in a particular way.

The Local Government Act, 1934-1985 provides for the creation and maintenance of a register of interests of members of councils and their families. Returns to this register must be lodged within sixty days of 30 June in each year. The register is maintained by the Chief Executive Officer of the Council and is accessible only to members of the Council.

#### *Franchise and method for voting*

A person, of or above the age of majority, may vote if he is an elector in the area for the House of Assembly, he lives in the area and has lodged a declaration with the council, or he is a ratepayer by virtue of being the sole owner or occupier of rateable property. A body corporate may be enrolled as an elector if it is a ratepayer by virtue of being the sole owner or occupier of rateable property. A group may be enrolled as an elector if all members are ratepayers, the members are joint owners or occupiers and at least one of them is not enrolled in his own right under a preceding right to enrolment. A body corporate or a group of persons votes by appointing a nominated agent. The Voters Roll and the House of Assembly Roll, are reviewed twice yearly so as to reflect entitlements in September and March.

The Local Government Act, 1934-1985 now prescribes that the elections for local government will be held on the first Saturday in May 1985 and bi-annually thereafter. Nominations for periodical elections close on the first Thursday in April.

The method of voting for an area divided into wards is by the system of 'optional preferential voting.' The voter is required to mark his first preference on the ballot paper, and may then, if he so desires, mark other preferences as he chooses. For an area not divided into wards the system of 'proportional voting' may be used in preference to the optional preferential system where the voter is required to mark his first preference on the ballot paper and then to mark second and third preferences etc. for the number of candidates equal to the number of vacancies required to be filled.

Councils not divided into wards must make a choice as to which system shall apply to its area. The decision must be made within two months of the conclusion of a periodical election. If no choice is made the optional preferential system applies.

### *Council Meetings*

A council must hold at least one ordinary meeting in each month. The meeting in a Municipality must not be held before 5 p.m. unless the Council resolves unanimously to meet before that time.

### **Local Government Officers**

Each council must appoint a town clerk (in a municipality) or a district clerk (in a district council) as the chief executive officer. A Council is not obliged to keep the statutory title of Chief Executive Officer but may assign a title as it determines. A Council may appoint other officers and employees as are necessary for the proper administration of the affairs of the council.

The Council must make certain other appointments such as Council Engineer, and Building Surveyor in accordance with the Local Government Act and other legislation. Other officers may be appointed but there is a requirement in regard to qualifications. Thus persons filling such positions as Building Inspector, Health Surveyor and Overseer must attain a certain standard of training and competence.

The Local Government Qualifications Committee issues certificates of registration required for appointment to prescribed offices. The Committee considers the educational qualifications, experience and suitability of applicants for certificates and can promote the establishment and development of study courses.

There are other officers employed in Councils who do not require specific qualifications. However previous experience and proven skills are usually regarded as desirable.

Employment in local government administration and works activity is now regarded as containing valuable career opportunity. Councils require a great range of skilled employees including mechanics, plant operators, community development officers, accountants, planning officers and computer operators.

Local Government employees are now provided with legislation assuring continuity of service between councils for long service leave purposes and the Local Government Superannuation Board, formed by legislation in 1984, provides for a common scheme of superannuation.

### **Local Government Industry Training Committee**

This body, established in 1977, is one of a number of State and National Training Committees endorsed and funded by the Commonwealth Government through the National Training Council. Its objective is to improve the education and training opportunities available to local government officers and elected members throughout South Australia.

### **Department of Local Government**

The Department of Local Government is established by the State Government to undertake the following functions;

- to provide policy advice to the Minister with respect to all matters within the field of local government, library and information services and to advise the Minister on the operation of the Local Government Act, the Libraries Act and other relevant legislation;
- to provide a central library and archival service for South Australia and to



administer the Library Subsidy Scheme to encourage and enable local councils to develop public library facilities and services;

- to administer legislation for which the Minister is responsible and to co-ordinate the activities of relevant committees, trusts and commissions;
- to provide legislative, administrative and financial advice to local government and to develop support services for councils;
- to maintain a close working relationship with the South Australian Local Government Association and to present an informed and balanced perspective on local government to relevant State Government Departments and agencies; and
- to develop relations with professional organisations, other institutions and interested groups in the field of library and information services.

### **Outback Areas Community Development Trust**

The Outback Areas Community Development Trust Act, 1978 established the Trust with the principal function of encouraging and supporting the activities of local groups in the isolated, unincorporated areas of the outback of South Australia in meeting the needs of their local communities. The OACDT is to fulfil the role of a local governing body in the area.

The Trust consists of five members appointed by the Governor. It can conduct development projects, make grants and loans to community organisations, and carry out works to facilitate the improvement of communications.

### **Coober Pedy**

The Coober Pedy (Local Government Extension) Act 1981 came into effect on 1 January 1982. The legislation allows the Coober Pedy Progress Association certain limited powers of local government. It was the consideration that the unique nature of Coober Pedy and its isolation required particular legislation. The legislation defines the area and provides a statutory means by which the Association could impose charges on property. The Association is empowered to build and maintain streets, roads and public places within the area; provide for the generation and transmission of electricity; provide for the reticulation and supply of non-potable water; it may provide and maintain halls, community centres and recreation facilities, an airfield and any other function for the benefit of the area.

### **Community Development Boards**

Community Development Boards have been established in local government areas with a wide representative membership to encourage and assist people to become more involved in the life of their local community. The Boards also promote the development of links and co-operation between organisations and groups within the local community. They are responsible to the local government authorities.

## **3.6 TOWN AND REGIONAL PLANNING**

There are many complex and often competing demands placed on the resources of the State, all of which need to be carefully considered when making land-use decisions. Planning is the process involved in balancing these demands to achieve development that meets the needs of the community while protecting the environment.

In South Australia, development is controlled under the Planning Act, 1982-1985. This Act is designed to ensure that both private and government development occurs in such a way as to meet the social and economic needs of the community, while at the same time, respecting the rights of individuals and protecting the environment.

In particular, the planning system in South Australia is designed to:

- give the community the opportunity to influence the way in which their local area and State is developed;
- give certainty to landowners regarding the use of land;
- protect important resources from activities that would hinder the use of the resource (*e.g.* pollution of watersheds, building over mineral deposits);
- protect areas of environmental significance (*e.g.* natural beauty, native flora and fauna);
- promote and co-ordinate the efficient and economic provision of community services and facilities (*e.g.* water supply, roads, sewerage);
- separate incompatible activities (*e.g.* housing and industry); and
- ensure development is safe and has an attractive appearance.

Planning policies provide the basis for the control of development. These policies are consolidated in one overall plan, known as the Development Plan. Local government authorities and the State Government use this plan, together with a common set of administrative procedures, known as the Development Control Regulations, to consider development applications.

In most instances local government authorities are responsible for preparing planning policies which define what sort of activities are allowed in different parts of their local area. Any changes to these policies are publicly exhibited to give people the opportunity to comment and determine the future of their area. This involvement is very important as planning is a process which affects the whole community in many different ways. By participating in this consultation process, people can influence what direction planning will take.

The majority of planning decisions are made by local government authorities, but where proposals affect areas or places of State significance, applications are sent to the South Australian Planning Commission for decision. Generally, a person wishing to undertake a development, including land division, should first approach the relevant local government authorities. If a project is highly controversial or likely to have a major social, economic or environmental significance, an Environmental Impact Statement may be required by the Minister for Environment and Planning. The Act ensures that environmental impact assessment is now integrated with planning controls. The Governor also has powers to intervene and make final decisions on major development proposals.

In addition to the role of councils, three bodies are established under the Act to administer the planning system.

The South Australian Planning Commission consists of a full-time Chairman and two part-time members. The Commission is provided with advice and administrative support primarily by the Department of Environment and Planning.

The main functions of the Commission are to:

- make decisions on development proposals of State significance and in areas without local government;
- co-ordinate State advice to local government authorities on certain development applications which are decided by them; and
- advise the Minister for Environment and Planning on matters relating to development of land.

The Advisory Committee on Planning includes the Chairman of the Commission and seven other members with experience in local government, housing and urban development, environment, commerce and industry, rural affairs and utility services. The Committee advises the Minister for Environment and Planning on urban

and regional planning, and in particular, on proposed amendments to planning policies in the Development Plan.

The Planning Appeal Tribunal comprises Judges under the Local and District Criminal Courts Act and Commissioners with experience in local government, planning and industry/commerce. The Tribunal is established as an independent body to hear appeals against decisions made by local government authorities or by the South Australian Planning Commission. While the Planning Act is the major legislation guiding development, more specific controls are administered by various authorities, *e.g.* pollution, building, health, mining and weed regulations. Together, they aim to ensure that land resources are used in a way that does not impose needless cost on the community or seriously affect the environment.

The Planning Act commenced full operation on 4 November 1982. During 1983, the Act was subject to a comprehensive review to ensure it was working in the manner intended. The Committee undertaking the review reported to the Government in November 1983. During 1984 public comment on this report was considered by the Government, and amendments to the Act are expected in 1985.

### **Coast Protection**

The Coast Protection Act, 1972-1985 provides for the conservation and protection of the State's coastline, including its foreshore and beaches. A Coast Protection Board of six members has been established under the chairmanship of the Chairman of the South Australian Planning Commission. Its objectives are broadly to protect and restore the coast, to develop any part of it for enjoyment by the public and to carry out research.

The Board makes grants to local government authorities to assist them with projects and to help carry out work within the boundaries of the appropriate coast protection districts. Work could include protective works, the provision of public facilities, conservation and rehabilitation works, and planning or engineering studies. Loss of sand from several metropolitan beaches is a major problem and the Board is devoting technical and financial resources to a sand replenishment program.

Coast protection districts are established, after which management plans are prepared setting out the measures needed to protect the coast and secure its most appropriate use. Management plans will be incorporated into the Development Plan.

Two coast protection districts, Metropolitan and Yorke, were declared in 1973; Fleurieu coast protection district and South East were declared in 1974 and 1976 respectively. The declaration of the remaining three districts, Eyre, Spencer and Kangaroo Island coast protection districts was gazetted in June 1984.

A consultant study of the Fleurieu district, which extends from the northern boundary of the hundred of Myponga to the centre of the Murray Mouth, was completed in 1978 and the draft management plans for the district, together with those for the Metropolitan coast protection district, were displayed for public comment in 1979. A draft management plan has been completed for the Yorke district, which includes the coastline from Port Gawler to the northern boundary of the District Council of Port Broughton. A study report for the South East district was completed in 1983 and a draft management plan is now under way.

In 1983-84 the Coast Protection Board spent \$1 300 000 on foreshore protection, repairs, improvements and restoration, studies and research. Much of this work was undertaken by local government bodies who, in many cases, contributed additional funds towards the cost of the works and land.

A major research study of Alternative Foreshore Protection Strategies was completed in 1984 setting out detailed research information on the Metropolitan Foreshore and

assessing alternative future strategies for its protection and funds towards the cost of the works and land.

**Rundle Mall**

A special article on the development of Rundle Mall appeared on pages 114-18 of the *South Australian Year Book* 1977.

## **PART 4**

# **LAND SETTLEMENT**

## **4.1 LAND TENURE**

The Department of Lands is one of the oldest government departments in the State. It implements the land management policies of the Government, maintains records of land tenure, and provides a number of services which are outlined in the following summary:

Registrar-General's Office is responsible for the maintenance of highly developed information systems of registration of land ownership and occupation. The Land Ownership and Tenure System (LOTS) provides detailed information from a computer based file of land titles and valuations. On-line facilities are presently available in a number of metropolitan and country centres and a wider distribution of terminals is planned;

Valuer-General's Division provides property valuations which are used by State and local governments in the management of revenue raising systems. Staff of the Valuer-General's Division are located in Adelaide, its suburbs, and a number of country towns;

Land Resource Management Division manages the Government's interest in Crown Land and other properties where the Crown has a residual interest. It also administers land settlement schemes and is involved in the development of residential and industrial estates in metropolitan and country areas. Officers of this Division are located in Adelaide, Berri, Ceduna, Kadina, Murray Bridge, Naracoorte, Port Lincoln, Port Augusta and Mount Gambier;

Survey Division is responsible for the co-ordination and control of surveys to provide a basis for the accurate location of land parcels. The Division also provides the aerial

photography and mapping which assist in the planning and management of State-wide development.

The Land Information Unit was established, with Government approval, during 1983-84 to co-ordinate the development and operation of the overall integrated Land Information System for the State.

### **INDENTIFICATION OF LAND AND REGISTRATION OF TITLES**

To facilitate the identification of land, the southern portion of the State encompassing all the arable land and certain pastoral areas has been subdivided into counties and these in turn have been generally subdivided into smaller units known as hundreds.

The first Surveyor-General, Colonel Light, had been instructed by the colonisation Commissioners to divide the colony into towns and counties, and in 1842 the first nine counties were proclaimed. As the administration was having considerable difficulty in regulating the leasing of unsold land for pasturage, it was proposed in 1846 that boundaries of areas smaller than counties be created and the system of hundreds, used in some counties in England, was adopted.

The boundaries of early counties and hundreds followed natural features. As further counties and hundreds were declared, natural features suitable for boundary delineation were not always available and in most cases the boundaries were set parallel to lines of longitude and latitude.

In 1887 an area of 100 000 hectares was declared to provide for the town and irrigation area of Renmark on the River Murray. Similar areas were subsequently surveyed and proclaimed adjacent to other sections of the Murray.

There are currently forty-nine counties covering 23 per cent of the State, the last of these being declared in 1933. The counties have an average size of 463 000 hectares, varying from County Light, north of Adelaide, with 217 470 hectares to County Jervois on Eyre Peninsula with 959 000 hectares.

Counties are generally subdivided into hundreds, although four northern counties remain undivided and a number of others are only partly subdivided. There is considerable variation in the size of hundreds, while the number of hundreds in a completely subdivided county varies from eight in Counties Alfred and Kintore to thirty-four in County Jervois. New hundreds are created occasionally, the present total being 535. Hundreds are further subdivided into sections which in turn may be divided into allotments or occasionally blocks.

Land is therefore, for the purposes of title, identified by the county, hundred, and section, and, where appropriate, block or allotment within which it falls. Land in towns and in proclaimed irrigation areas may further be identified as falling within that town or area.

### **Torrens System of Land Registration**

Land transactions in South Australia are conducted under the Torrens System of land registration as provided by the Real Property Act, 1886-1985. This system, first introduced by the Real Property Act, 1858, was named after its author, Sir Robert Torrens, who was at that time Registrar-General of the Colony.

The Torrens System provides that the matter of title to land shall be a government responsibility. Each piece of land is represented by a certificate of title which, with very few (and in practice unimportant) exceptions, is guaranteed by the State. Retrospective examination which is necessary with general law title is eliminated and the costs and time involved in conveyancing can thus be kept to a minimum.

An amendment to the Real Property Act in 1967 provided for the creation of interests

in land by a three-dimensional division of the land into strata units by means of strata plans. Under its provisions, a strata plan creates individual private rights (as well as common entitlements) in the property depicted in the plan. The enactment of this legislation enabled titles to be issued for home unit developments within a system which provided for the individual rights of the unit owners and for their corporate rights and responsibilities in common property.

The following table shows details of mortgages, transfers and other transactions relating to land under the Real Property Act, 1886-1985 for each of the three years to June 1984.

#### Real Property Act Transactions, South Australia

Item	1981-82	1982-83	1983-84
Amount lent on mortgages .....	1 442	\$ million 1 638	2 253
		Number	
Certificate of title:			
Issues (a) .....	14 970	14 995	15 483
Transfers .....	45 780	45 965	58 836
Mortgages (b):			
Registrations .....	42 463	43 119	35 514
Discharges .....	48 222	46 291	50 868

(a) Includes limited titles and some replacement of old documents without change of ownership of land.

(b) Includes mortgages of Crown and other leases.

The Real Property (Registration of Titles) Act, 1945-1975 provides for the small proportion of land remaining under the general law to be converted to the Torrens System and this transition is still in progress in certain areas.

### SYSTEMS OF TENURE

#### CURRENT TENURE

In the table below, land in South Australia is classified according to its present form of tenure. Land sold, dedicated and under agreement to purchase does not represent the accumulated total of all alienated lands as certain alienated lands repurchased by the Crown are currently held under leases.

#### Land and Reserves Tenure, South Australia, 30 June 1984

Particulars	Area Hectares	Proportion Per Cent
Land sold and dedicated .....	17 930 796	18.22
Land held under agreement to purchase .....	243 236	0.25
Land held under lease .....	50 847 855	51.65
Freshwater lakes .....	90 973	0.09
Salt water lakes and lagoons .....	3 107 986	3.16
National parks (incl. Flinders Chase) .....	4 574 095	4.65
Aboriginal reserves .....	778 995	0.79
Unleased, vacant land, etc. ....	20 863 742	21.19
Total .....	98 437 678	100.00

In 1901 the area sold, dedicated and held under lease and agreement to purchase, *i.e.* the area occupied, was 37 934 751 hectares, increasing to 57 472 548 in 1924, but falling to 52 370 744 in 1931 because of decreased areas under pastoral lease.

### LAND ADMINISTRATION

Approximately 90 per cent of the occupied area of South Australia comprises Crown land held under lease and as such is controlled by the Department of Lands. This Department is charged with the general administration of Crown land, and with making available under appropriate tenure newly developed land and such land coming into the hands of the Crown by resumption, expiry, surrender or forfeiture of existing tenure. The consent of the Minister of Lands is required before the transfer, mortgage or sublease of any of the forms of tenure administered by the Department.

Land available for leasing is allotted by the Land Board and, in the case of pastoral land, by the Pastoral Board, which interviews applicants and makes allotment on merit. The Boards also advise the Minister on matters connected with land settlement.

Leases and licences under the various mining Acts are issued and supervised by the Department of Mines, while the Woods and Forests Department and the Engineering and Water Supply Department are responsible for the issuing of leases over reserves and areas under their control.

### METHODS OF ALIENATING LAND

#### **Sales under Agreement to Purchase**

There is provision for Crown land to be alienated through an agreement to purchase. The purchase money is payable over varying terms not exceeding sixty-four years and the purchaser must comply with certain special conditions concerning the improvement and the development of the land, including the fencing of the property within the first five years. It is not necessary for an agreement to run the full term as, subject to the Minister's approval, purchase may be completed after six years provided the purchaser has complied with all the necessary conditions. Land allotted under Agreements to Purchase amounted to 1 412 hectares in 1983-84.

#### **Sales at Auction**

Certain areas of Crown land may be sold at auction for cash. These include town land, suburban land exempt from the operations of the Land Board, and Crown land which has been offered for lease and not taken up within two years. Town land so sold is subject to limitations on resale and conveyance through mortgage during the first six years, and it is usually conditional that improvements, for an agreed function and of a certain minimum value, be erected within a stipulated period.

#### **Trust Grants and Reservations**

A free grant of Crown land may be made for any public purpose. Of the 858 244 hectares thus alienated at 30 June 1984, 310 799 hectares had been granted for the Defence Research Centre. Land may also be dedicated and reserved for a variety of purposes such as forest reserves, Aboriginal reserves, national parks, conservation parks, recreation parks, parklands and schools.



## METHODS OF LEASING AND LICENSING LAND

**Leases for Limited Terms**

Pastoral land outside the counties and large areas in the northern counties is held under pastoral leases granted for terms of forty-two years (except in the case of previously unoccupied lands when the term is twenty-one years) or for shorter terms where the land may be required for other purposes. Under the conditions of these leases the lessee must expend in improvements a sum as recommended by the Pastoral Board and must comply with certain conditions on stocking. Rent is based on the carrying capacity of the land, the distance from markets and the proximity of transport facilities, and in the case of recent leases, is reviewed every seven years. Such land may be reallocated to the same lessees on expiry of the existing terms.

In certain circumstances, for example, where land has not been surveyed or its potential is uncertain, or where permanent alienation is not desirable, miscellaneous leases are issued for periods up to twenty-one years. Certain business and industrial sites may also be held under miscellaneous lease. Annual licences may be granted over Crown land for certain industrial sites, grazing areas, fishermen's residences, holiday shack sites and other approved purposes.

Land reserved for the Woods and Forests Department was leased for cultivation or grazing purposes for a period not exceeding forty-two years. At 30 June 1984, there was no forest land under lease.

**Perpetual Leases**

Leases in perpetuity may be offered over Crown land which has been surveyed or delineated on the public maps. The lessee is required to provide boundary fencing and may be required to clear and render available for cultivation a certain proportion of the land within a specified period.

In certain cases special perpetual leases are available under which no rent is payable for the first four years, and with less than full rent over the next six years.

Sections in government controlled irrigation areas are offered on perpetual lease and, if the land has not been cultivated previously, rents and water rates are payable on a sliding scale for the first three years. Certain improvements are required to be made. Town allotments in irrigation areas may be offered under perpetual lease either at auction, by calling applications, or may be let on annual licence. Allotments may also be offered at auction for cash or for agreement to purchase. Allotments not sold at auction may be sold by private contract.

During 1983-84, 1 125 hectares in irrigation areas were allotted under perpetual leases.

## MINING CLAIMS, LEASES AND LICENCES

**Legislation**

The granting of leases and licences and the pegging of new claims is governed by the Mining Act, 1971-1983. A total of 296 private mines was current at 30 June 1984. Mineral royalties received by the Department of Mines and Energy during 1983-84 amounted to \$13 397 000.

The following table shows tenements held under the Mining Act, 1971-1983 and the Petroleum Act, 1940-1984 for the last six years.

**Tenements Held Under Mining and Petroleum Acts, South Australia  
At 30 June**

Particulars	1979	1980	1981	1982	1983	1984
Mineral claims .....	131	91	112	154	189	105
Precious stones claims .....	1 450	1 484	1 464	1 512	1 759	964
Leases .....	1 393	1 476	1 534	1 601	1 656	1 612
Exploration licences .....	123	231	369	372	326	203
Petroleum licences and permits .....	19	23	28	35	35	28

### **Minerals Resumed**

The mineral rights on private land were resumed by the Crown in July 1972 so that all minerals are the property of the Crown. If minerals (other than extractive minerals) which have been resumed under the Mining Act, 1971-1983 are mined any royalties collected upon the minerals recovered are payable to the person so divested of his property in minerals upon application.

A royalty of 2.5 per cent (5 per cent for extractive minerals) of the value of the minerals, realised upon their sale, is payable to the Minister of Mines and Energy on all minerals (except precious stones) recovered and sold or used for commercial purposes. No royalty is payable on precious stones.

### **Extractive Minerals**

Extractive minerals are defined as sand, gravel, stone, shell, shale or clay but does not include any such minerals that are mined for a prescribed purpose, nor fire-clay, bentonite or kaolin. No person is permitted to peg claims for extractive minerals on freehold land other than the person who, immediately before the operation of the Mining Act, 1971-1983 held the mineral rights or had rights to mine the minerals by holding a claim or lease over the deposit. Normal pegging rights apply to extractive minerals on other than freehold land or exempt land, and also apply to other minerals on freehold land.

The royalties collected from the mining of extractive minerals are paid into the Extractive Areas Rehabilitation Fund to be used in rehabilitating land disturbed by mining operations. The Fund may also be used for research into methods of mining engineering and practice with a view to reducing environmental damage or impairment. Receipts into this Fund during 1983-84 amounted to \$775 000, while expenditure was \$642 000.

### **General Conditions**

A current miners right or, in the case of precious stones, a precious stones prospecting permit must be held by every prospector to authorise the pegging of the appropriate class of claim.

At least three weeks notice of entry for prospecting or mining purposes must be given to the landholder if the land is freehold or held on perpetual lease. Three weeks notice must also be given to any landholder before 'declared equipment' can be used on his land. In either case the landholder may lodge an objection with the Warden's Court.

A claim (other than a precious stones claim) has a maximum term of twelve months, is not transferable and must be converted to a lease before minerals can be removed for sale or used for commercial purposes.

A mining lease may be granted after twenty-eight days notice in the *South Australian Government Gazette* for a term of up to twenty-one years any may contain rights in

relation to renewal. A mining lease is transferable with the Minister's consent and an annual rent is payable on a mining lease. Nineteen-twentieths of the rent collected on a lease on freehold land is paid to the landholder.

Exploration licences have a maximum term of five years and a maximum area of 2 500 square kilometres and are subject to the terms agreed. Twenty-eight days notice must be given in the *South Australian Government Gazette* before an exploration licence is granted.

Mining leases and exploration licences are granted under conditions which give proper consideration to the protection of the environment.

## 4.2 LAND SETTLEMENT SCHEMES

### CLOSER SETTLEMENT

There is provision in the Crown Lands Act for acquisition of land for subdivision to encourage closer settlement. Such land is divided into blocks and offered under conditional agreements to purchase with payment over thirty-five and sixty-four year periods.

No land has been purchased for closer settlement since 1952-53, by which time 384 298 hectares had been purchased at a cost of \$5 730 400, including 21 008 hectares set apart for returned service personnel from the 1914-18 War, 1 302 hectares for forest and water conservation purposes and 10 758 hectares purchased in connection with the reclamation of River Murray swamp lands.

At 30 June 1984 a total of 11 280 hectares of closer settlement lands was held under agreement to purchase.

### MARGINAL AREAS ASSISTANCE

The excessive opening up of the drier marginal lands for wheat growing resulted in many settlers in these areas being forced to leave their holdings, particularly in the 1930s.

Investigations showed that if the settlers were to succeed, cereal growing would need to be replaced by grazing. The Commonwealth Government established a Marginal Lands Improvement Fund to assist this development. The money was used to purchase properties from certain settlers with a view to enlarging the holdings of others, to provide fencing and water supplies and to pay small grants to settlers vacating holdings in which there was no equity.

The Fund was provided by the Commonwealth Government under the *Wheat Industries Assistance Act 1938*. An amount of \$1 426 000 was allocated to South Australia. By arrangement with the Commonwealth Government the rentals and income from sales of improvements on marginal lands which had been subject to adjustments under the above Fund were retained as an additional fund to be used for assistance to settlers in marginal areas. The Fund was closed in 1982-83.

### CROWN LANDS DEVELOPMENT

The Crown Lands Development Act, 1943-1973, administered by the Department of Lands, provides for the development of Crown land, or land which the Department may purchase, and for the allotment of such land to suitable settlers.

A substantial proportion of the land under the Act was developed with the object of inclusion in the War Service Land Settlement Scheme. Properties not accepted for the scheme were subsequently allotted under the Act, and since then a number of individual properties have been surrendered to the Crown for development and re-allotment to the former holders.

## ASSISTANCE FOR RETURNED SERVICE PERSONNEL

## 1914-18 WAR

Following the 1914-18 War, the State Minister for Repatriation was authorised to acquire land for the purpose of re-settling discharged servicemen. Such land could be purchased by agreement or acquired compulsorily, whether held in fee simple or under Crown lease. Crown land could also be set apart for this purpose. The land acquired was subdivided where appropriate and offered under agreement to purchase, perpetual lease or a term lease. Provision was also made for the discharging of existing mortgages on freehold properties already held by ex-servicemen, with fresh mortgages in favour of the Minister of Repatriation.

In all, 3 801 ex-servicemen were settled, with 3 008 settling in 'dry lands' and 793 in irrigation areas.

## 1939-45 WAR AND KOREA-MALAYA OPERATIONS

## War Service Land Settlement

Under the War Service Land Settlement Scheme, provision was made for the settlement on rural holdings of certain ex-servicemen from the 1939-45 War and Korea and Malaya operations.

Suitable Crown land was made available and other land was acquired. This land was subdivided and developed to a stage where it could be brought into production by the individual settler within a reasonable time. Basic structural improvements were provided and it was then offered to eligible settlers on perpetual leases. Credit facilities are available to these settlers for working capital, the purchase of stock and equipment, and for the effecting of further improvements.

The following table shows for recent years the number of farms allotted and total expenditure under the War Service Land Settlement Scheme.

**War Service Land Settlement, South Australia**  
**Farms Allotted and Total Expenditure to 30 June**

Particulars	1980	1981	1982	1983
<b>Farms allotted:</b>				
Number .....	1 032	1 032	1 032	1 032
Area ('000 hectares) .....	285	285	285	285
<b>Expenditure:</b>		\$'000		
State .....	10 838	10 838	10 838	10 838
Commonwealth Government;				
Acquisition of land .....	6 846	6 846	6 846	6 846
Development and improvement of				
land .....	31 648	31 647	31 577	31 527
Provision of credit facilities .....	45 166	45 328	45 413	45 486
Other .....	17 625	17 662	17 695	17 725
<b>Total expenditure by Commonwealth Government .....</b>	<b>101 285</b>	<b>101 483</b>	<b>101 531</b>	<b>101 584</b>
<b>Total expenditure .....</b>	<b>112 123</b>	<b>112 321</b>	<b>112 369</b>	<b>112 422</b>

During the first year after allotment in the case of 'dry lands' settlers, and the first year after an irrigation holding became self-supporting the settler was granted a living allowance and was exempted from the payment of rent or interest in respect of the holding, and of payments on account of principal or interest in respect of advances, other than advances for working capital. Provisions exist for a settler on 'dry lands' to convert property to freehold after a period of ten years by the payment of a fixed purchase price and the repayment of all advances. There is no provision for freeholding in government irrigation areas.

The Department of Lands administers the War Service Land Settlement Scheme on behalf of the Commonwealth Government. The Commonwealth Government provides the funds and meets the costs of the scheme with the exception of administration costs and two-fifths of any losses, which are met by the South Australian Government.

All large scale development operations under the scheme have been completed. The principal areas settled are in the South East, on Kangaroo Island, Eyre Peninsula, and in irrigation areas along the River Murray.

#### **Loans and Allowances (Agricultural Occupations) Scheme**

The Commonwealth Government through the State Bank of South Australia provided financial assistance for the establishment or re-establishment of ex-servicemen in agricultural occupations. Loans were made for a variety of purposes and non-repayable allowances were made where income during the course of re-establishment proved to be inadequate. The payment of allowances and the advancing of new loans ceased in 1956-57 by which date loans totalling \$2 009 096 had been made to 1 288 ex-servicemen, and allowances totalling \$649 218 had been granted to 2 264 ex-servicemen.

An additional Marginal Lands Improvement Fund was established in 1943 from which expenditure of \$416 476 had been made to 30 June 1978 by the Department of Lands.

#### **SOUTH AUSTRALIAN URBAN LAND TRUST**

The Urban Land Trust Act, 1981, which repealed the Land Commission Act, 1973-1977 and continues the corporation previously known as the South Australian Land Commission under the new name of the South Australian Urban Land Trust, came into operation by proclamation on 26 November 1981.

The Urban Land Trust Act incorporated the changes made by the South Australian Government in April 1980, restricting the former Land Commission to a principal role of providing an urban land bank of broadacres. The Trust has continued to provide for the orderly release of properly serviced land through re-subdivision and subdivision for creation of marketable parcels of broadacre sites.

Another important function of the Trust is to sell its stock of serviced residential allotments, without upsetting the balance of the market and by using the private sector exclusively through the appointment of managing agents. In 1982-83 the Trust sold 701 residential allotments, an increase of 59 per cent on the 1981-82 sales of 441 allotments.

Since first releasing fully serviced housing allotments in 1975, the Trust has sold, to 30 June 1983, a total of 5 348 allotments. The balance held by the Trust at 30 June 1983 totalled 1 239 allotments in five local government areas.

The Trust's broadacre land bank totalled 3 768 hectares in eight local government areas as at 30 June 1983. Through leasing arrangements, the Trust has continued its policy of keeping the maximum amount of broadacre land in productive use pending sale. Sales of broadacre areas have included land for residential subdivision, school sites, roadworks, commercial uses and community purposes.

Total revenue of \$8.48 million from the sale of land in 1982-83 was 42 per cent above

the previous year's figure of \$5.95 million and included \$1.89 million from broadacre land sales.

In accordance with the terms of settlement to the Commonwealth Government in relation to the South Australian Land Commission, a further payment of \$5.5 million was made by the Trust in June 1983 to the South Australian Treasury for payment to the Commonwealth. Together with \$25 million repaid in 1981-82, payments of \$30.5 million have now been made.

### PRIVATE LAND DEVELOPMENT SCHEMES

The most important private scheme in South Australia has been a project, begun in 1949 by the Australian Mutual Provident Society to develop a large area of land in the south-east of the State in what was previously known as the Ninety Mile Desert. The development of this area was made possible by the discovery that the retarded nature of the country was caused by certain soil deficiencies, and that these deficiencies could be overcome by the addition of trace elements (mainly copper sulphate and zinc sulphate) to the soil.

Large tracts of unimproved land were obtained either by purchasing existing leases or by Crown allotment. Intending settlers were employed by the Society in the development work, covering a period of approximately five years, and were then allotted a holding over which they had a perpetual lease title. The Society provided finance for the purchase of land, and for stock, plant and working expenses. In all, 38 880 hectares were taken up by employees of the Society.

In addition to the development of land for employees a large area was developed to various stages and sold to the public; sales in this category amounted to 132 435 hectares.

### ADVANCES TO THE RURAL SECTOR GOVERNMENT ADVANCES

#### Advances Administered by State Bank

In addition to advances made under schemes mentioned above, the State Bank administers certain funds provided by the State for rural development.

Under the Advances to Settlers Act, 1930-1972, the Bank makes advances to settlers for a variety of purposes including general improvements, the purchase of livestock and the discharging of existing mortgages. The Loans to Producers Act, 1927-1980 empowers the Bank to make advances for certain developmental projects and the purchase of certain capital equipment. The Bank also administers Acts providing loans for the construction of vermin-proof fencing, general fencing and the laying of water piping.

#### Financial Details

The following table gives details of advances made to the rural sector by government authorities and balances outstanding at 30 June 1984.

#### Advances to Settlers, South Australia

Particulars	Advances made during 1983-84	Total Advances at 30 June 1984	Principal Outstanding at 30 June 1984	
			Persons	Amount
	\$'000	\$'000	Number	\$'000
Department of Lands:				
Advances to soldier settlers .....	—	10 144	97	69
Advances under closer settlements Acts .....	—	5 461	63	46
Settlement of returned service personnel (1939-45 War) (a) .....	71	45 394	245	3 121

## Advances to Settlers, South Australia (continued)

Particulars	Advances made during 1983-84	Total Advances at 30 June 1984	Principal Outstanding at 30 June 1984	
			Persons	Amount
	\$'000	\$'000	Number	\$'000
Department of Lands: (continued)				
Advances under Crown Lands Development Act .....	—	986	34	332
Department of Agriculture:				
Advances for Natural Disaster Relief(b) .....	4 892	59 294	2 680	33 366
Advances under Marginal Dairy Farms Reconstruction Scheme(a)(b) .....	2	1 199	46	219
Advances under Rural Reconstruction Scheme (a) .....	421	36 298	576	19 671
Advances under Fruitgrowing Reconstruction Scheme(a)(b) .....	—	418	—	—
Advances under Beef Industry Assistance Scheme(b) .....	1	736	5	3
Advances under Rural Adjustment Scheme .....	3 218	27 821	779	21 517
Advances under Tree Pull Scheme .....	—	264	32	263
Advances for Bushfire Concessional Housing loans .....	126	371	19	363

(a) Advances made from funds provided by the Commonwealth Government. (b) Currently not operative.

## Farmers Assistance Fund

The Primary Producers Emergency Assistance Act, 1967-1982 provides a means of servicing the essential carry-on requirements of primary producers suffering loss as a result of drought, fire, flood, frost, animal or plant disease, insect pest or other natural calamity. Assistance is given to enable such persons to continue in the business of primary production where no other source of financial assistance is available to them and who, by virtue of the assistance, have a reasonable prospect of being able to continue in the business of primary production.

Payments and/or direct grants may also be made towards the cost of fodder or water for starving stock, including the transport of livestock to and from agistment and for any other purpose deemed necessary.

The first \$3.0 million expenditure in any calamity is to be borne from State funds.

The terms and conditions of loans, including terms and conditions relating to interest, are determined by the Minister.

## Rural Industry Assistance Scheme

The Rural Industry Assistance (Special Provisions) Act, 1971-1972 and Rural Industry Assistance Act, 1977 gave effect to agreements between the Commonwealth and South Australian Governments for a scheme of assistance which provides for carry-on finance, debt reconstruction, farm build-up, farm improvement, rehabilitation and household support loans.

Details of the number of applications received and the expenditure involved are shown in the following table.

**Rural Industry Assistance: South Australia, Applications and Approvals from  
Commencement of Operations to 30 June 1984 <sup>(a)</sup>**

Debt reconstruction:	
Applications received .....	1 824
Applications declined .....	957
Applications approved .....	752
Total assistance approved .....	\$23 454 000
Average assistance approved .....	\$31 200

**Rural Industry Assistance: South Australia, Applications, Approvals and Expenditures  
from Commencement of Operations to 30 June 1984 <sup>(a)</sup> (continued)**

Farm build-up:	
Applications received .....	1 856
Applications declined .....	681
Applications approved .....	1 065
Total assistance approved .....	\$39 191 000
Average assistance approved .....	\$36 800
Farm improvement:	
Applications received .....	209
Applications declined .....	60
Applications approved .....	123
Total assistance approved .....	\$1 587 000
Average assistance approved .....	\$12 900
Rehabilitation:	
Applications received/approved .....	28
Total assistance approved .....	\$102 500
Expenditure to 30 June 1977 .....	\$102 500
Household support:	
Applications received .....	181
Applications declined .....	21
Applications approved .....	150
Total assistance approved .....	\$988 000

(a) Commenced 27 May 1971.

Carry-on finance and debt reconstruction are designed to assist the farmer who, although having sound prospects on a long-term basis, has used all of his cash and credit resources and cannot meet his financial commitments.

Farm build-up is to assist the process whereby farms which are too small to be profitable can be enlarged to an economic unit.

Farm improvement is intended to assist in restoration of an uneconomic property to economic viability by improving the use of the property without increasing its size.

Rehabilitation and household support measures provide limited assistance to alleviate conditions of personal hardship.

Part B carry-on assistance provides aid to specific rural industries suffering the effects of a severe market downturn or similar situation.

Funds were provided initially by the transfer of the balance of the Primary Producers Debt Adjustment Fund (\$804 636) to the Rural Industry Fund. Other contributions to the Fund are made by the Commonwealth Government and at 30 June 1984, \$50 407 000 had been received. The State is liable for the repayment to the Commonwealth Government of 75 per cent of the moneys made available by the Commonwealth Government under the terms of the Rural Assistance (Special Provisions) Act, 1971-1972 and 85 per cent of the moneys advanced under the terms of the Rural Industry Assistance Act, 1977.

Total advances from the Fund by way of repayable loans to 30 June 1984 amounted to \$64 119 000.



## 4.3 STATISTICAL DIVISIONS AND SUBDIVISIONS

For the purpose of presenting the statistical series of South Australia, the State is divided into a number of areas which are entitled statistical divisions.

### PREVIOUS STATISTICAL DIVISIONS

Statistical series for South Australia have been published at various times under two different sets of statistical divisions—'Primary' Statistical Divisions, the boundaries of which have followed the boundaries of proclaimed counties, and 'Census' Statistical Divisions, where boundaries for the most part have followed the boundaries of local government areas.

Before 1889 agricultural statistics were published for counties from at least 1851, and local government areas from 1854. Publication of statistics by 'Primary' Statistical Divisions commenced in 1889 on the basis of five statistical divisions made up of thirty-eight counties. In 1920-21 an additional division was created to limit the number of counties in each division (as the number had by this time increased to forty-eight) and the number of 'Primary' divisions remained at six from that date.

Early population census results were published on the basis of local government areas and counties, but for the 1891 and 1901 Censuses the five 'Primary' Statistical Divisions were used. The Census of 1911, which was the first conducted by the Commonwealth Government reverted to use of counties for published results whereas subsequent censuses, up to and including 1947, were published using local government areas. Details of the 1954 and subsequent population censuses have been published by 'Census' Statistical Divisions.

For the 1966 Census an additional division, the Adelaide Statistical Division, was delineated to embrace the area expected to contain the urban development of Adelaide during a period of at least twenty years.

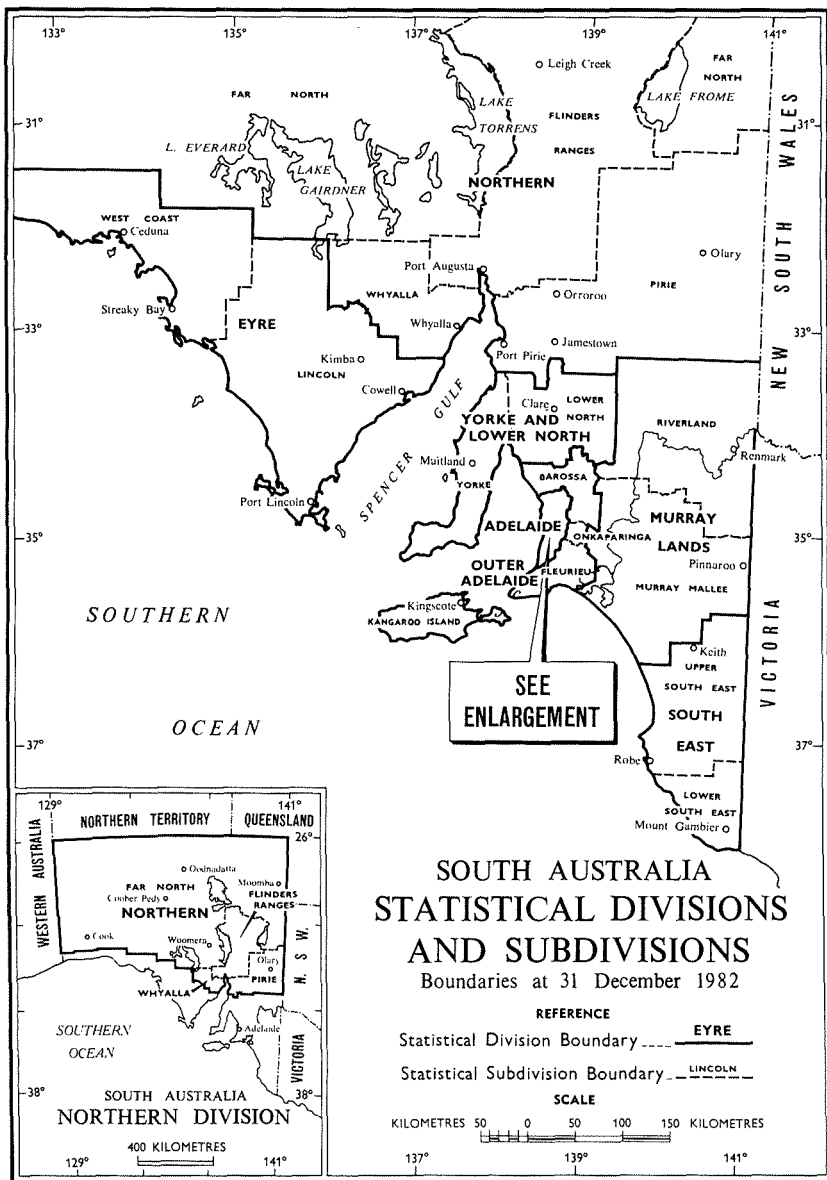
Although, ideally, statistical division boundaries should remain unchanged over time so as to enable comparisons to be made of constant areas, growth in certain statistical divisions, together with the adoption of the Adelaide Statistical Division for the 1966 Population Census, made it desirable to review the boundaries and to select a new group of statistical divisions.

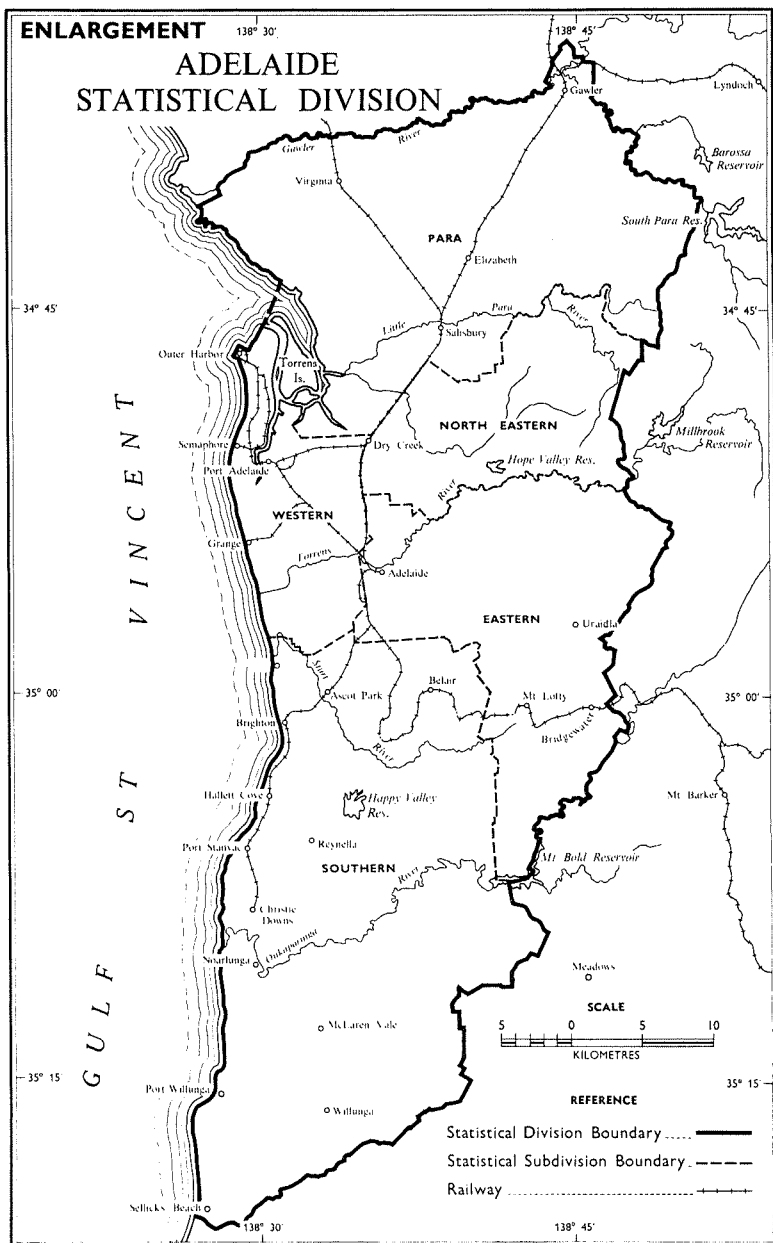
The new divisions were designed to represent closely allied and meaningful areas of production and community interest and where areas smaller than divisions were considered to be important, subdivisions were introduced.

These statistical divisions and subdivisions were adopted for the publication of official statistics from 1 January 1971.

### CURRENT DIVISIONS AND SUBDIVISIONS

From 1 July 1976 new statistical divisions and subdivisions were adopted for the publication of official statistics. Maps showing the new statistical divisions and subdivisions are included on pages 106 and 107. A more detailed article together with descriptions of the divisions and subdivisions was included on pages 135-43 of the *South Australian Year Book* 1977.





## **PART 5**

# **POPULATION**

## **5.1 THE CENSUS**

### **Early 'musters'**

Population returns in one form or another have existed from a very early period in the history of Australia. The earliest enumerations were known as 'musters', and although the actual results of very few of them have been preserved, it is probable that during the early days of colonisation they were of frequent occurrence. The first official 'muster' was taken in 1788 soon after the new settlement at Sydney Cove was formed, and in 1803 the first 'muster' of convicts in Van Diemen's Land (now Tasmania) was conducted.

### **Development of the Census**

The first regular census in Australia was taken in New South Wales in November 1828, and included the population of Moreton Bay (now Queensland) but not Van Diemen's Land (Tasmania). Details of the names, ages and civil conditions of the inhabitants were sought. The next census was taken in 1833, and was followed by another in 1836, when arrangements were made for the enumeration of the population of the newly-established settlement at Port Phillip (Victoria). The first censuses taken in Tasmania, Victoria and Queensland as separate colonies were in 1841, 1854 and 1861 respectively. The first recognised census in South Australia was taken in 1844 and in Western Australia in 1848. The 1881 census was the first simultaneous census taken in Australia and formed part of the first simultaneous census of the British Empire.

Under the Commonwealth of Australia Constitution Act of 1900, 'Census and Statistics' became Commonwealth Government functions and with the passing of the

empowering legislation, the *Census and Statistics Act 1905*, all censuses of Australia have been taken under the authority of this Act and the regulations made thereunder. The first Australian census collected under the Act was that of 1911; subsequent censuses were taken in the years 1921, 1933, 1947, 1954, 1961, 1966, 1971, 1976 and 1981. The Act provides that the census should be taken by means of a householders schedule delivered to every dwelling and that this schedule should contain particulars of the dwelling and its inmates.

### Periodicity and Date of the Census

The *Census and Statistics Act 1905* provided that the Census should be taken 'in the year one thousand nine hundred and eleven and in every tenth year thereafter'. But in 1930 this was amended by the addition of the words 'or at such other time as is prescribed'. Because of the economic depression prevailing in 1931 the third Australian census was not taken until 1933, and because of war conditions the fourth Australian census was not taken until 1947. Consideration was then given to the practicability of holding future censuses in the series of years originally envisaged. However, it was considered that the interval of years from 1947 to 1951 was too short; therefore it was decided to take the fifth census in 1954 at the mid-point of the period from 1947 to 1961. The sixth census was held in 1961. Because of the administrative demand for more frequent counts of the population the seventh census was held in 1966, the eighth in 1971, the ninth in 1976, and the tenth in 1981.

The Census and Statistics Act provides that 'the Census day shall be a day appointed for that purpose by proclamation', but the actual date is not specified. The census is conducted on a basis which records the population actually in Australia at the place where located on Census day. However for the 1976 and 1981 Censuses there is facility to extract population details according to place of usual residence from the local government level to the whole State. In the selection of Census day every endeavour is made to choose a date when there is a minimum displacement of population. In 1911 and 1921, Census day was near the beginning of April, but in 1933 and subsequently, Census day has been at the end of June because this time has fulfilled the condition mentioned and is otherwise suitable, being the end of a financial year and of a quarterly period used extensively for statistical purposes.

### Scope of the Census

The census covers the population and dwellings of Australia.

Persons excluded from results of censuses up to 1966 were:

- (i) diplomatic representatives of other Governments and their families and staffs having diplomatic immunity in accordance with international practice;
- (ii) full-blood Aboriginals, pursuant to Section 127 of the Constitution which specifically excluded them from the count of the population.

Diplomatic representatives, families and staffs are still excluded but, following the results of a referendum held in 1967, Section 127 of the Constitution was repealed and full-blood Aboriginals were included in censuses from 1971. In 1971 Census publications, where 1966 figures are also shown, these figures have been amended to include full-blood Aboriginals and thus provide comparability: this can be done for all tables other than those on the labour force.

The count of persons at the census includes babies born at or before midnight of census day and excludes persons dying before midnight of census day. Travellers on ships in or between Australian ports at midnight of census day are also included.

For census purposes the Act defines a dwelling as 'a building, erection, or tenement, whether permanent or temporary, which is wholly or partly used for the purpose of

human habitation and includes any ship or other vessel in any port of the Commonwealth or in any inland waters thereof, or any ship or vessel on a passage between any two Commonwealth ports'. Section 10 (2) provides that 'where a building is let, sublet, or held in different apartments and occupied by different persons or families, each part so let, sublet, or held and used for the purpose of human habitation shall be deemed a dwelling'. Measureable characteristics such as class of dwellings, nature of occupancy, number of inmates in relation to number of rooms, mortgages and rentals are recorded.

Census collectors are responsible for recording, from personal observations or inquiry, particulars of dwellings which are unoccupied on census day, including those temporarily unoccupied or those used for 'holiday purposes'. Dwellings excluded from census results are those occupied by accredited persons having diplomatic immunity. Dwellings occupied solely by full-blood Aborigines also were excluded at censuses before 1971.

The most recent census in Australia was conducted on 30 June 1981. A list of tables produced is contained in the *Catalogue of 1981 Census Tables Final Edition* (2139.0). The date of the next census is 30 June 1986.

A more detailed description of the population census in Australia was included on pages 77-86 of the *South Australian Year Book* 1968.

## 5.2 POPULATION GROWTH AND DISTRIBUTION

The count of persons in South Australia had reached 17 366 persons at the first Census on 26 February 1844. In 1861, twenty-five years after the first settlers arrived, the count was 126 830 and this figure had more than doubled by the Census in 1881. By 1921 the census count was almost 500 000 persons and it is estimated to have reached 1 000 000 persons in January 1963. The population at 30 June 1966 was estimated as 1 094 984 persons.

The following table shows counts of persons at the census dates indicated.

Persons <sup>(a)</sup> , South Australia						
Census Date	Males	Females	Persons	Average Annual Increase		
				Number	Per Cent	
1844 26 February .....	9 686	7 680	17 366	..	..	..
1846 26 February .....	12 670	9 720	22 390	2 512	14.47	
1851 1 January .....	35 302	28 398	63 700	8 262	36.90	
1855 31 March .....	43 720	42 101	85 821	5 530	8.68	
1861 8 April .....	65 048	61 782	126 830	6 835	7.96	
1866 26 March .....	85 334	78 118	163 452	7 324	5.78	
1871 2 April .....	95 236	90 189	185 425	4 395	2.69	
1876 26 March .....	109 841	102 687	212 528	5 421	2.92	
1881 3 April .....	145 113	130 231	275 344	12 563	5.91	
1891 5 April .....	161 920	153 292	315 212	3 987	1.45	
1901 31 March .....	180 485	177 861	358 346	4 313	1.37	
1911 3 April .....	207 358	201 200	408 558	5 021	1.40	
1921 4 April .....	248 267	246 893	495 160	8 660	2.12	
1933 30 June .....	290 962	289 987	580 949	7 149	1.44	
1947 30 June .....	320 031	326 042	646 073	4 652	0.80	
1954 30 June .....	403 903	393 191	797 094	21 574	3.34	
1961 30 June .....	490 225	479 115	969 340	24 607	3.09	
1966 30 June .....	550 196	544 788	1 094 984	25 129	2.59	

(a) Excludes full-blood Aborigines before the 1966 Census.

For 1971 and subsequent years, the table above is replaced by a new series compiled on the basis of estimated resident population. An information paper entitled *Population Estimates: An Outline of the New Conceptual Basis of ABS Population Estimates* (3216.0) provides details of the conceptual changes.

### Estimated Resident Population, South Australia

Census 30 June	Males	Females	Persons	Average Annual Increase	
				Number	Per Cent
1971 .....	597 572	602 542	1 200 114		
1976 .....	635 152	638 918	1 274 070	14 791	1.23
1981 .....	653 940	664 830	1 318 770	8 940	0.70

Intercensal estimates of resident population are derived by adding to the estimated population at the census the recorded natural increase, the allocation to the State of portion of the net gain to Australia by overseas migration and gains and corresponding losses that result from movement between South Australia and other States. The interstate movements are estimated using address changes for family allowance payments notified to the Department of Social Security and data from the ABS Internal Migration Survey. Estimated resident population for South Australia at 30 June 1984 was 670 000 males, 682 900 females and 1 352 900 persons.

The estimated mean resident population for South Australia is calculated for the years ended 30 June and 31 December. Estimates for the last six years are shown below.

### Estimated Mean Resident Population, South Australia

Year	Year Ended 30 June			Year Ended 31 December		
	Males	Females	Persons	Males	Females	Persons
1978 .....	642 900	648 900	1 291 800	644 600	651 400	1 296 000
1979 .....	645 500	653 200	1 298 600	646 500	654 700	1 301 200
1980 .....	648 100	656 300	1 304 400	649 800	658 200	1 308 000
1981 .....	651 700	661 100	1 312 800	653 900	664 500	1 318 400
1982 .....	656 100	667 700	1 323 800	658 500	670 500	1 329 000
1983 .....	661 400	673 400	1 334 800	p 664 600	p 676 700	p 1 341 300

### Increases in the Estimated Resident Population, South Australia

Year Ended 30 June	Population			Natural Increase	Total Increase	Rate of Growth
	Males	Females	Persons			
1979 .....	646 200	654 900	1 301 100	8 655	4 900	0.38
1980 .....	650 200	658 200	1 308 400	8 781	7 300	0.56
1981 .....	653 900	664 800	1 318 800	9 154	10 400	0.79
1982 .....	658 300	670 400	1 328 700	9 182	10 000	0.76
1983 .....	664 700	676 800	1 341 500	9 121	12 800	0.96
1984p .....	n.y.a.	n.y.a.	1 353 000	10 391	11 472	0.86

From June 1971, intercensal estimates of overseas migration exclude short-term (less than one year) movements, consistent with the measurement of interstate migration. The

following table of intercensal population growth rates shows the effects of some important aspects of the development of the State, namely:

- (i) the net migration, especially of males, away from South Australia following the mineral discoveries in other States in the 1880s and early 1890s;
- (ii) the slow growth during the economic depression of the 1930s when natural increase fell to a particularly low level; and
- (iii) the high rate of migration in the post 1939-45 War period up to 1960.

The State's rate of population increase was slower than the Australian rate in every period from 1881 to 1947. From 1947 the steep rise in the rate of net migration enabled an above-average growth rate to be achieved, and this was maintained until 1966. Since 1966 however, the State's growth rate has been generally below the Australian rate.

**Intercensal Compound Annual Population Growth Rates  
South Australia and Australia, 1861-1981**

Period	Per Cent Growth Rate Per Annum	
	South Australia	Australia
1861-71 .....	3.72	3.70
1871-81 .....	4.25	3.08
1881-91 .....	1.25	3.51
1891-1901 .....	1.02	1.80
1901-11 .....	1.55	1.63
1911-21 .....	1.81	2.03
1921-33 .....	1.35	1.85
1933-47 .....	0.76	0.85
1947-54 .....	3.04	2.47
1954-61 .....	2.83	2.25
1961-66 .....	2.47	1.98
1966-71 .....	1.46	2.21
1971-76 .....	0.70	1.24
1976-81 .....	0.70	1.24

**Sex Distribution**

The masculinity of the population is expressed as the number of males per 100 females. The following table gives masculinity according to age group of the estimated resident population.

**Estimated Resident Population, Masculinity According to Age, South Australia**

Age Group (Years)	30 June			
	1971	1976	1981	1983
0-4 .....	104.52	104.86	104.57	104.96
5-14 .....	104.13	105.76	105.42	105.31
15-24 .....	100.90	102.27	102.40	102.34
25-34 .....	102.44	102.27	101.34	101.66
35-44 .....	105.23	103.39	100.37	100.65
45-64 .....	99.31	100.77	99.38	99.13
65 and over .....	70.46	69.92	72.32	72.25
All ages .....	99.18	99.41	98.36	98.22



### Age Distribution

Details of the age distribution of the population are of particular importance because they reveal changes which have occurred in the age structure over time and supply basic material for the calculation of fertility rates, mortality rates, annuity rates and probabilities of survival.

Age distribution of the resident population at the 1981 census and at 30 June 1983 are given in the following table. Large absolute changes in population between the 1981 Census and 30 June 1983 occurred in the age groups 35-39, which increased by 12 831, and 5-9, 15-19 and 50-54, which fell by 6 289, 3 627 and 4 055 respectively. The movement in the older two age groups is partly because of the post 1939-45 War birth rate increase and the low birth rates of the depression years of the early 1930s. The decrease in the lower age groups can in part be explained by the sharp decline in fertility in recent years, although there has been a slight increase in birth rates since 1981.

**Age Distribution of the Estimated Resident Population, South Australia**

Age Last Birthday (Years)	30 June 1981			30 June 1983			Increase
	Males	Females	Persons	Males	Females	Persons	Persons
0-4 .....	47 540	45 461	93 001	48 479	46 188	94 667	1 666
5-9 .....	53 663	50 649	104 312	50 385	47 638	98 023	(-) 6 289
10-14 .....	58 470	55 723	114 193	58 827	56 068	114 895	702
15-19 .....	59 321	57 677	116 998	57 834	55 537	113 371	(-) 3 627
20-24 .....	58 330	57 215	115 545	58 739	58 375	117 114	1 569
25-29 .....	54 193	53 343	107 536	55 384	54 122	109 506	1 970
30-34 .....	53 593	53 022	106 615	53 543	53 026	106 569	(-) 46
35-39 .....	42 118	41 905	84 023	48 489	48 365	96 854	12 831
40-44 .....	35 573	35 500	71 073	37 650	37 216	74 866	3 793
45-49 .....	32 852	31 877	64 729	33 029	32 805	65 834	1 105
50-54 .....	36 615	35 243	71 858	34 393	33 410	67 803	(-) 4 055
55-59 .....	35 200	35 546	70 746	35 906	35 569	71 475	729
60-64 .....	28 034	30 863	58 897	30 410	33 130	63 540	4 643
65-69 .....	24 376	27 501	51 877	24 412	27 903	52 315	438
70-74 .....	16 589	21 459	38 048	18 243	23 378	41 621	3 573
75-79 .....	9 909	14 576	24 485	10 818	16 022	26 840	2 355
80 and over .....	7 564	17 269	24 833	8 190	18 039	26 229	1 396
Total .....	653 940	664 829	1 318 769	664 731	676 791	1 341 522	22 753

The median age of the resident population of South Australia at the 1971 Census was 27·5 years, rising to 28·7 years at 30 June 1976. The figure for 30 June 1983 is estimated to be 31·1 years (males 30·2 and females 31·9), the highest of any Australian State.

The next table shows that the proportion of the population under 15 years of age fell markedly between 1901 and 1947, rose significantly between 1947 and 1961 but since then has continued to fall to an estimated 22·9 per cent at 30 June 1983, the lowest in Australia. South Australia also had the highest percentage of its population aged 65 years and over (11·0 per cent) of any Australian State.

**Proportional Age Distribution of Population, South Australia**

Year	Males			Females			Persons		
	Under 15 Years	15 Years and Under 65	65 Years and Over	Under 15 Years	15 Years and Under 65	65 Years and Over	Under 15 Years	15 Years and Under 65	65 Years and Over
	Per cent								
1901 .....	36·0	60·0	4·0	35·9	59·8	4·3	35·9	59·9	4·2
1911 .....	31·1	64·4	4·5	31·3	63·8	4·9	31·2	64·1	4·7
1921 .....	32·2	62·8	5·0	31·3	63·5	5·2	31·7	63·2	5·1
1933 .....	26·8	66·6	6·6	26·0	66·6	7·4	26·4	66·6	7·0
1947 .....	25·1	67·0	7·9	23·5	67·0	9·5	24·3	67·0	8·7

**Proportional Age Distribution of Population, South Australia (continued)**

Year	Males			Females			Persons		
	Under 15 Years	15 Years and Under 65	65 Years and Over	Under 15 Years	15 Years and Under 65	65 Years and Over	Under 15 Years	15 Years and Under 65	65 Years and Over
				Per cent					
1954 .....	29.2	62.9	7.9	28.6	61.3	10.1	28.9	62.1	9.0
1961 .....	31.4	61.2	7.4	30.7	59.1	10.2	31.1	60.1	8.8
1966 .....	30.7	62.4	7.0	29.5	60.5	10.0	30.1	61.4	8.5
1971 .....	29.5	63.4	7.1	28.1	61.9	10.0	28.8	62.7	8.5
1976 .....	27.0	65.4	7.6	25.4	63.8	10.8	26.2	64.6	9.2
1981 .....	24.4	66.6	9.0	22.8	65.0	12.2	23.6	65.8	10.6
1983 .....	23.7	67.0	9.3	22.1	65.2	12.6	22.9	66.1	11.0

**EARLY HISTORY OF SETTLEMENT**

A detailed description of early settlement in South Australia and information on the 1851 Census was included on pages 116-7 of the *South Australian Year Book 1970*.

**DISTRIBUTION OF POPULATION****Urban Centres**

Commencing with the 1966 Census, a boundary has been drawn at each census around each cluster of 1 000 or more persons (or around known holiday resorts of less population if they contain 250 or more dwellings of which at least 100 are occupied). These clusters are named urban centres and the persons and dwellings enumerated therein are classified as urban for statistical purposes.

When delimiting urban centres of less than 25 000 persons the urban centres are determined subjectively (by inspection of aerial photographs, by field inspection and/or by consideration of any other information that is available). All contiguous urban growth is included, together with close but non-contiguous development which could be regarded as part of the centre. For urban centres with 25 000 or more persons the basic criterion used is *population density*. The geographic units classified according to the density criterion are collection districts, the smallest units available, which must have a density of at least 200 persons per square kilometre for inclusion in the urban centre. Any gap in urban development of less than three kilometres (by the shortest rail or road distance) is ignored while urban areas three or more kilometres apart are treated as separate even if the gap comprises mainly reserved land or a natural barrier. Particular rules apply to contiguous areas with special functions such as airports, sporting areas and industrial areas which do not meet the density criterion.

The boundary of such an urban centre is thus a moving one which reflects the process of urbanisation. The use of objective criteria enables valid comparisons to be made between one urban centre and another, and between the count of persons for an urban centre at one census with the count at succeeding censuses.

**Population in Urban Adelaide**

At the 1966 Census, Urban Adelaide contained nearly all the metropolitan area as defined at the 1961 Census, and, in addition, included the City of Elizabeth and large portions of the Cities of Salisbury and Tea Tree Gully, and small parts of Munno Para and East Torrens District Councils. Results of the 1971 Census showed that Urban Adelaide had extended to encompass the whole of the urban area of Reynella-Port Noarlunga as well as fringe development particularly in northern suburbs (see map on page 116). Urban Adelaide as defined for the 1981 Census comprised nineteen complete local government areas and part of eight others and totalled 652.0 square kilometres.

Although figures for Urban Adelaide, defined according to the density criteria, are not available for the 1947 and 1954 Censuses, there appears to have been a continual increase in the proportion of the total State population residing in Urban Adelaide until the 1971 Census. At the 1961 Census, Urban Adelaide defined according to the density criteria is estimated to have contained 580 449 persons or 59.9 per cent of the total State and this figure had increased to 728 279 (66 per cent) at the 1966 Census.

In 1971, the amalgamation of Urban Adelaide and Urban Reynella-Port Noarlunga, together with the inclusion of further peripheral development, resulted in an increase to 809 482 persons (69 per cent of the State count). At the 1976 Census, Urban Adelaide's share of the total State count was little changed, at just less than 69 per cent, and has remained relatively constant at the 1981 Census.

**Persons in Urban and Rural Areas, South Australia <sup>(a)</sup>**

Census	Urban						Total (Including Migratory)
	Adelaide(b)		Other(c)		Rural		
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number
1921 .....	255 375	51.57	41 637	8.41	195 054	39.39	495 160
1933 .....	312 619	53.81	51 456	8.86	214 762	36.97	580 949
1947 .....	382 454	59.20	65 911	10.20	196 007	30.34	646 073
1954 .....	483 508	60.66	110 107	13.82	201 133	25.23	797 094
1961 .....	587 957	60.66	177 380	18.30	200 065	20.64	969 340
1966 .....	728 279	66.51	174 964	15.98	190 167	17.37	1 094 984
1971(d) .....	809 482	68.97	183 187	15.61	179 148	15.26	1 173 707
1976(d) .....	857 196	68.85	198 777	15.97	187 546	15.07	1 244 756
1981(d) .....	882 520	68.68	207 934	16.18	193 628	15.07	1 285 033

(a) Excludes full-blood Aborigines before the 1966 Census.

(b) See definition of Urban Adelaide above.

(c) 'Other Urban' up to the 1947 Census comprised all municipalities outside Urban Adelaide. For the 1954 and 1961 Censuses non-municipal towns of 1 000 or more persons were also included, but in 1961 municipalities of less than 1 000 persons were excluded. From 1966 onwards the figures comprise clusters of 1 000 or more persons and a small number of holiday resorts which are regarded as urban on a dwelling density basis.

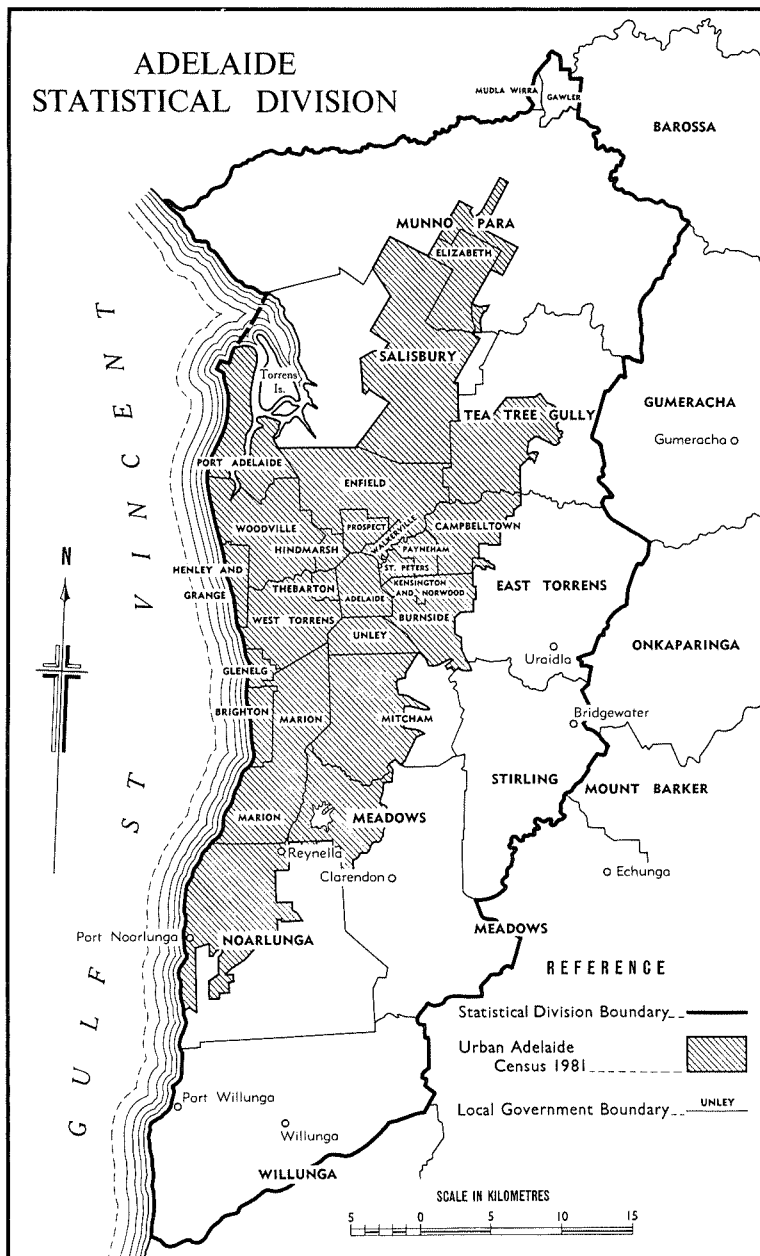
(d) The figures are not adjusted for census underenumeration.

### Population in Other Urban Centres

Only a very small proportion (16 per cent) of South Australia's population is located in urban centres outside of the capital city compared with the three eastern States, New South Wales, Victoria and Queensland. Whereas, in each of the eastern States, there are at least six centres outside the capital city with a population in excess of 20 000, Whyalla with a count of 29 962 persons at the Census of 30 June 1981 is the only such centre in South Australia.

**Persons in Urban Centres, South Australia <sup>(a)</sup>**

Urban Centre	Census at 30 June		Urban Centre	Census at 30 June	
	1976	1981		1976	1981
Adelaide .....	857 196	882 520	Bordertown .....	1 983	2 138
Aldinga Beach .....	983	2 021	Burra .....	1 201	1 222
Angaston .....	1 734	1 753	Ceduna .....	2 327	2 794
Balaklava .....	1 237	1 306	Clare .....	2 260	2 381
Barmera .....	1 946	2 014	Coober Pedy .....	1 903	2 078
Berri .....	2 890	3 419	Crafers-Bridgewater	6 600	9 764



Persons in Urban Centres: South Australia <sup>(a)</sup> (continued)

Urban Centre	Census at 30 June		Urban Centre	Census at 30 June	
	1976	1981		1976	1981
Crystal Brook .....	1 410	1 240	Penola .....	1 254	1 205
Gawler .....	8 596	9 433	Peterborough .....	2 760	2 575
Goolwa .....	1 148	1 624	Port Augusta .....	13 092	15 254
Hahndorf .....	937	1 274	Port Broughton .....	654	587
Jamestown .....	1 325	1 384	Port Elliot .....	768	773
Kadina .....	2 849	2 943	Port Lincoln .....	10 272	10 675
Kapunda .....	1 362	1 340	Port MacDonnell ....	712	682
Keith .....	1 191	1 147	Port Pirie .....	15 005	14 695
Kingscote .....	1 121	1 236	Port Vincent .....	335	394
Kingston (SE) .....	1 250	1 325	Quorn .....	1 048	1 049
Leigh Creek .....	999	1 635	Renmark .....	3 371	3 475
Lobethal .....	1 422	1 522	Sellicks Beach .....	241	342
Loxton .....	2 786	3 100	Strathalbyn .....	1 701	1 756
Maitland .....	1 017	1 085	Streaky Bay .....	1 008	985
Mannum .....	2 137	1 984	Tailem Bend .....	1 999	1 677
Millicent .....	5 471	5 255	Tanunda .....	2 254	2 621
Moonta .....	1 751	1 924	Victor Harbor .....	4 279	4 522
Mount Barker .....	3 204	4 190	Waikerie .....	1 611	1 629
Mount Gambier .....	19 292	19 880	Walleroo .....	2 045	2 043
Murray Bridge .....	8 740	8 664	Whyalla .....	33 426	29 962
Naracoorte .....	4 571	4 758	Woomera .....	2 958	1 658
Nuriootpa .....	2 808	2 851			

(a) See text for definition of 'urban'. The figures have not been adjusted for census underenumeration.

Between 1976 and 1981 most urban centres beyond the Adelaide Statistical Division experienced population growth; this was most evident in the River Murray towns and the West Coast. The 'Iron Triangle' was somewhat of an enigma in that Port Augusta continued to expand, whereas Port Pirie and Whyalla declined.

### Statistical Divisions

Around Urban Adelaide a further boundary has been defined. This boundary circumscribes the area in close economic and social contact with the urban centre, and which contains the anticipated urban development of the city for a period of at least twenty to thirty years. This boundary defines the Adelaide Statistical Division (see map on page 116). In addition to Urban Adelaide there are two urban centres within the Adelaide Statistical Division, Urban Gawler and Urban Crafers-Bridgewater.

The six further statistical divisions which have been delineated in South Australia are mainly amalgamations of local government areas. They represent closely allied and meaningful areas of production and community interest. Factors taken into account when determining their boundaries were differential living zones, patterns of retail shopping, location and nature of industry, transport routes, provincial newspaper circulation, coverage of provincial radio and television stations, spheres of activity of cultural groups and sporting associations.

The estimated resident population in the Adelaide Statistical Division is shown in the following table.

**Estimated Resident Population in Local Government Areas, Adelaide Statistical Division <sup>(a)</sup>**

Statistical Subdivision and Local Government Area	Estimated Resident Population at 30 June		
	1976	1981	1984 <sup>p</sup>
Para .....	109 930	122 690	127 580
Elizabeth (C) .....	34 470	33 310	32 420
Gawler (M) .....	6 230	6 300	6 730
Light (DC) (part) .....	540	900	890
Munno Para (DC) .....	23 010	27 620	29 800
Salisbury (C) (part) .....	45 700	54 560	57 740
North Eastern .....	147 390	154 600	157 540
Enfield (C) (part) .....	56 070	50 900	50 040
Gumeracha (DC) (part) .....	750	950	1 090
Salisbury (C) (part) .....	33 520	33 670	33 670
Tea Tree Gully (C) .....	57 060	69 080	72 740
Western .....	219 010	212 220	213 050
Enfield (C) (part) .....	18 880	17 120	16 870
Henley and Grange (C) .....	17 040	15 870	15 200
Hindmarsh (M) .....	9 010	7 810	8 010
Port Adelaide (C) .....	36 910	36 480	37 160
Thebarton (M) .....	10 680	9 500	9 450
West Torrens (C) .....	49 480	46 220	46 070
Woodville (C) .....	77 020	79 230	80 310
Unincorporated .....	Included with Port Adelaide (C)		
Eastern .....	213 650	210 660	213 360
Adelaide (C) .....	12 060	11 190	12 000
Burnside (C) .....	39 630	38 690	38 440
Campbelltown (C) .....	42 670	44 300	45 480
East Torrens (DC) .....	4 750	5 220	5 610
Kensington and Norwood (C) .....	9 830	8 990	8 920
Onkaparinga (DC) (part) .....	110	100	120
Payneham (C) .....	18 180	17 020	16 730
Prospect (C) .....	20 180	19 160	19 030
St Peters (M) .....	9 660	8 710	8 550
Stirling (DC) .....	10 940	13 550	14 590
Unley (C) .....	38 210	36 730	36 840
Walkerville (M) .....	7 430	7 020	7 060
Southern .....	234 070	253 790	267 410
Brighton (C) .....	22 380	20 320	19 680
Glenelg (C) .....	14 720	13 550	13 720
Happy Valley (C) .....	12 560	20 490	25 240
Marion (C) .....	69 500	68 780	70 540
Mitcham (C) .....	61 660	61 690	62 090
Noarlunga (C) .....	49 020	62 630	68 620
Willunga (DC) (part) .....	4 240	6 340	7 530
Total .....	924 060	953 960	978 940

<sup>(a)</sup> All estimates are for boundaries existing at 30 June 1984.

(C) Municipality with city status (DC) District Council (M) Municipality

The estimated resident populations of statistical divisions and subdivisions at 30 June 1976, 1981 and 1984 are shown in the following table.

## Estimated Resident Population of Statistical Divisions and Subdivisions, South Australia

Statistical Division and Subdivision	30 June		
	1976	1981	1984 <sub>p</sub>
<b>Adelaide:</b>			
Para .....	109 930	122 690	127 580
North Eastern .....	147 390	154 600	157 540
Western .....	219 010	212 220	213 050
Eastern .....	213 650	210 660	213 360
Southern .....	234 070	253 790	267 410
Total Adelaide .....	924 060	953 960	978 940
<b>Outer Adelaide:</b>			
Barossa .....	25 620	28 750	30 210
Kangaroo Island .....	3 300	3 720	4 090
Onkaparinga .....	13 260	16 320	17 480
Fleurieu .....	18 100	20 780	22 120
Total Outer Adelaide .....	60 280	69 580	73 910
<b>Yorke and Lower North:</b>			
Yorke .....	21 150	22 200	22 790
Lower North .....	19 490	19 520	19 870
Total Yorke and Lower North .....	40 640	41 720	42 660
<b>Murray Lands:</b>			
Riverland .....	30 520	32 780	34 100
Murray Mallee .....	30 120	30 490	31 100
Total Murray Lands .....	60 650	63 270	65 200
<b>South East:</b>			
Upper South East .....	18 930	19 570	20 140
Lower South East .....	40 590	42 060	42 660
Total South East .....	59 510	61 630	62 800
<b>Eyre:</b>			
Lincoln .....	26 360	27 410	28 330
West Coast .....	6 590	7 040	7 190
Total Eyre .....	32 960	34 450	35 520
<b>Northern:</b>			
Whyalla .....	35 460	32 670	31 730
Pirie .....	32 400	31 680	31 510
Flinders Ranges .....	19 400	21 630	22 470
Far North .....	8 480	8 180	8 250
Total Northern .....	95 750	94 160	93 960
Total State (including migratory) .....	1 274 100	1 318 770	1 352 990

(a) Based on preliminary 1981 estimated resident population.



The following table indicates that under all series the proportion of the population under 15 is projected to decrease significantly while the proportion 65 and over increases.

**Projected Age Group Proportions (including Migration), South Australia <sup>(a)</sup>**

Age Group (Years)	At 30 June	Series A	Series B	Series C	Series D
Per cent					
0-14 .....	1981 .....	23·61	23·61	23·61	23·61
	2001 .....	19·13	20·77	19·46	21·08
	2021 .....	16·08	17·99	16·66	18·50
15-64 .....	1981 .....	65·83	65·83	65·83	65·83
	2001 .....	66·47	65·13	66·45	65·13
	2021 .....	63·72	62·94	64·18	63·37
65 and over .....	1981 .....	10·55	10·55	10·55	10·55
	2001 .....	14·41	14·09	14·09	13·78
	2021 .....	20·20	19·07	19·16	18·13

(a) Based on preliminary 1981 estimated resident population.

#### Further References

Additional information may be found in the following publications:

- 2404.0 *Persons and Dwellings in Local Government Areas and Urban Centres—South Australia*
- 2438.0 *Summary characteristics of Persons and Dwellings—South Australia*
- 3201.4 *Estimated Resident Population in Local Government Areas—South Australia*
- 3202.4 *Estimated Resident Population in Local Government Areas—South Australia, June 1976 to June 1981*
- 3203.4 *Projections of the Population of South Australia, 1981-2021*

## 5.3 MIGRATION

Under the Constitution, the Commonwealth makes laws governing migration.

People wishing to enter Australia as permanent settlers must either:

- (i) have spouses, parents, children, fiances, brothers or sisters legally resident in Australia who can sponsor them; or
- (ii) be refugees or in other special humanitarian need; or
- (iii) have skills or personal qualities which will benefit Australia.

New Zealanders may enter Australia without prior authority if they hold a valid passport.

In 1982-83, a total of 93 000 settlers (including 17 054 refugees) arrived in Australia. The intake for 1983-84 has been set at 80-90 000. Of the 12 435 Indo-Chinese refugees who arrived in Australia during 1982-83, a total of 1 955 came to South Australia.

#### Overseas Arrivals and Departures

The following table gives details for 1982 of overseas arrivals who gave South Australia as their State of intended residence and people leaving for overseas who gave

South Australia as their State of residence. Long-term refers to an intended stay of more than twelve months, and short-term as less than twelve months.

**Overseas Arrivals and Departures: Mode of Transport and Category of Traveller**  
**State of Residence, South Australia, 1982**

Category of Traveller	By Sea		By Air		Total
	Males	Females	Males	Females	
ARRIVALS					
Assisted settlers .....	—	—	1 479	1 230	2 709
Other settlers .....	7	7	2 322	2 454	4 790
Total permanent .....	7	7	3 801	3 684	7 499
Long-term residents returning .....	13	9	1 810	1 799	3 631
Long-term visitors arriving .....	1	1	935	668	1 605
Total long-term .....	14	10	2 745	2 467	5 236
Total permanent and long-term .....	21	17	6 546	6 151	12 735
Short-term residents returning .....	138	171	37 724	36 481	74 514
Short-term visitors arriving .....	42	51	17 144	15 113	32 350
Total arrivals .....	201	239	61 414	57 745	119 599
DEPARTURES					
Former settlers .....	2	7	457	443	909
Other residents .....	2	3	236	257	498
Total permanent .....	4	10	693	700	1 407
Long-term residents departing .....	18	9	1 681	1 552	3 260
Long-term visitors departing .....	1	2	624	414	1 041
Total long-term .....	19	11	2 305	1 966	4 301
Total permanent and long-term .....	23	21	2 998	2 666	5 708
Short-term residents departing .....	217	238	37 792	35 633	73 880
Short-term visitors departing .....	16	13	16 467	15 799	32 295
Total departures .....	256	272	57 257	54 098	111 883

### Visitors

People are allowed to visit Australia for short periods for tourism, business, to see relatives or friends, or for pre-arranged medical treatment. Visitors are not to undertake a job or formal study while in Australia, and must leave at the end of their authorised period of stay.

### Overseas students

As part of its aid program, Australia accepts foreign students and trainees to enable them to acquire skills and qualifications of benefit both to themselves and their countries. Some are sponsored by their governments while the rest are private students.

### Temporary Residents

Permanent residents are given first priority for employment, but temporary residence may be granted to people from overseas, who possess expertise not available here, so that they can engage in pre-arranged specialised activities. Persons seeking temporary residence for longer than twelve months are required to meet the health and character requirements which apply to permanent settlers.

### Ethnic Affairs

South Australia has a higher proportion of overseas-born than Australia. Although the majority of these were born in the United Kingdom and Ireland, significant numbers were born in Italy, Germany, Greece, the Netherlands and Poland, and South East Asian countries. Over one hundred languages are spoken by residents, in addition to the many Aboriginal languages.

The Commonwealth Department of Immigration and Ethnic Affairs and the South Australian Ethnic Affairs Commission work together to develop understanding and foster harmonious relations among all elements of this multi-cultural society. This includes seeking to allow people to develop their cultures and beliefs (subject to Australian laws) and at the same time to give everyone equality of opportunity and access to services and programs. A range of services and facilities is available to encourage and assist migrants to settle into the Australian community.

### Citizenship

The status of 'Australian Citizen' was created under the *Nationality and Citizenship Act 1948*, which came into force on 26 January 1949. The relevant Act is now the *Australian Citizenship Act 1948* and under its provisions all migrants, regardless of origin, are required to satisfy uniform requirements for the granting of citizenship. Citizenship is normally conferred at ceremonies conducted by local government authorities throughout the State.

**Persons Granted Australian Citizenship, South Australia**

Previous Citizenship	1977	1978	1979	1980	1981	1982
Austrian .....	37	30	15	17	14	21
British .....	2 526	2 198	1 864	1 967	2 213	3 140
Cypriot .....	30	56	108	131	68	40
Czechoslovak .....	37	21	9	6	4	14
Danish .....	11	12	22	4	7	14
Dutch .....	120	103	64	59	60	63
Finnish .....	33	14	17	12	20	13
French .....	75	65	35	51	24	37
German .....	142	137	152	129	82	108
Greek .....	698	473	374	325	200	196
Hungarian .....	29	24	13	16	12	9
Indian .....	36	44	43	47	23	30
Irish .....	22	38	24	21	28	57
Italian .....	769	672	489	464	360	346
Lebanese .....	79	43	37	125	71	43
Malaysian .....	45	55	70	71	61	39
Maltese .....	49	50	68	48	45	40
New Zealander .....	22	17	19	21	57	109
Polish .....	61	92	56	37	46	50
Singaporean .....	17	31	10	21	19	10
South African .....	50	32	31	53	60	69
Spanish .....	62	30	29	9	20	12
Turkish .....	19	11	25	20	26	16
US American .....	14	20	8	12	17	13
Yugoslav .....	537	445	387	325	160	196
Stateless .....	44	34	75	33	23	28
Other .....	426	362	372	459	544	989
Total .....	5 990	5 109	4 416	4 483	4 264	5 702

### Education

The Commonwealth Government, with the co-operation of the States, funds and co-ordinates the Adult Migrant Education Program which aims to provide information about living in Australia and opportunities for non-English speaking migrants to learn the English language.

More details concerning migrant education appear in Part 6.2 Education.

## 5.4 CHARACTERISTICS OF THE POPULATION

The following tables provide brief, summary information on characteristics of the population obtained from the most recent censuses. Full listings of tables produced are contained in the relevant Catalogues of Census Tables.

### Marital Status

The marital status of the population was ascertained at the censuses, when a statement of never married, married, married but permanently separated (legally or otherwise), widowed, or divorced was required in respect of every person enumerated.

In 1981 the number of persons who were stated to have never married represented 43.2 per cent of total persons, a lower proportion than in 1976. Married persons in 1981 represented 46.8 per cent of the total compared with 47.5 per cent in 1976.

At the 1976 Census 82.0 per cent of widowed persons were female and this proportion had increased to 82.7 per cent in 1981.

**Marital Status of Persons, South Australia <sup>(a)</sup>**

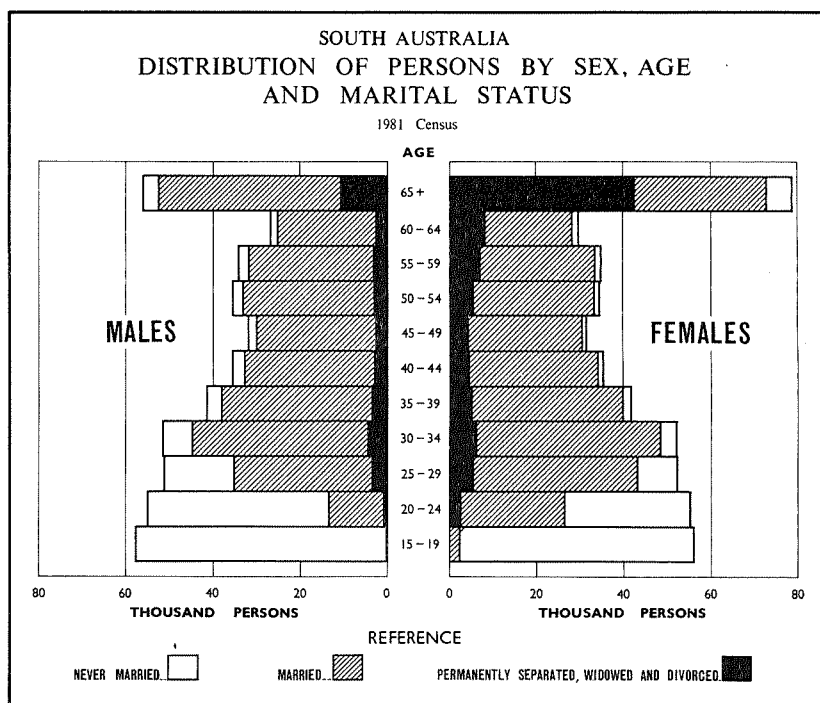
Marital Status	Census 30 June 1976				Census 30 June 1981			
	Males		Females		Males		Females	
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
Never married:								
Under 15 years of age	169 471	27.3	160 595	25.7	157 161	24.7	149 416	23.0
15 years of age and over	124 921	20.1	94 635	15.2	139 271	21.9	109 241	16.8
Total never married .....	294 392	47.5	255 230	40.9	296 432	46.6	258 657	39.8
Married .....	295 976	47.7	295 468	47.3	300 669	47.3	300 654	46.3
Married but permanently separated .....	9 698	1.6	11 890	1.9	11 171	1.8	13 244	2.0
Widowed .....	11 118	1.8	50 784	8.1	11 705	1.8	55 879	8.6
Divorced .....	8 976	1.4	11 223	1.8	15 719	2.5	20 903	3.2
Total .....	620 161	100.0	624 595	100.0	635 696	100.0	649 337	100.0

(a) Census counts not adjusted for underenumeration.

The diagram on page 125 shows details of sex, age and marital status of persons in South Australia at the 1981 Census.

### The Aboriginal population

Statistics of the total Aboriginal population should be treated with caution as comparison of the changes in numbers from one census to another can be affected by social attitudes and by changes made in the nature of the question in an attempt to improve coverage and reporting. Analysis of 1976 Census results indicated that some overstatement of the number of Aboriginals and Torres Strait Islanders occurred in the 1976 Census. These issues are discussed in more detail in *Census 81—Aboriginals and Torres Strait Islanders* (2153.0).



The following table shows the major locations of Aborigines within South Australia at the 1976 and 1981 Censuses.

**Location of Aborigines and Torres Strait Islanders, South Australia**

Locality	Census Count		Locality	Census Count	
	1976	1981		1976	1981
Adelaide .....	4 357	3 217	Nepabunna .....	94	92
Amata .....		180	Oodnadatta .....	109	100
Pipalyatjara .....	473	64	Point McLeay .....	202	98
Aparawatatjar (Fregon) .....		203	Point Pearce .....	282	214
Ceduna .....	142	312	Port Augusta .....	753	1 140
Cooper Pedy .....	25	70	Port Lincoln .....	228	348
Ernabella .....	373	322	Port Pirie .....	71	78
Everard Park .....	34	132	Quorn .....	76	69
Gerrard Mission .....	101	125	Umoona .....	163	110
Indulkana .....	400	301	Whyalla .....	199	305
Koonibba .....	132	119	Yalata .....	345	281
Marree .....	131	65	Remainder of State .....	1 719	1 636
Mount Gambier .....	95	60			
Murray Bridge .....	211	184	Total .....	10 714	9 825

## Country of Birth

Of the persons in South Australia at the 1911 Census, 85.7 per cent were Australian born, as were 88.3 per cent in 1921, 90.3 per cent in 1933, and 93.3 per cent in 1947. Overseas migration had lowered the proportion of Australian born persons to 86.1 per cent by 1954, while in 1981 the proportion was down to 76.2 per cent. The proportion of persons in South Australia born in the United Kingdom, including the Republic of Ireland, fell from 11.0 per cent in 1911 to 5.1 per cent in 1947, and rose to 12.7 per cent in 1976. In 1981 there was a decrease in the absolute number of persons in South Australia born in European countries. The proportion born in the United Kingdom fell to 11.8 per cent.

Country of Birth of Persons, South Australia <sup>(a)</sup>

Country of Birth	Census 30 June 1976	Census 30 June 1981		Increase	
	Persons	Males	Females	Persons	Persons
Australia .....	951 535	479 753	499 922	979 675	28 140
New Zealand .....	4 098	3 354	3 264	6 618	2 520
Europe:					
United Kingdom and Republic of Ireland	157 882	75 358	76 729	152 087	(-) 5 795
Germany .....	15 393	7 147	7 608	14 755	(-) 638
Greece .....	14 706	7 409	6 797	14 206	(-) 500
Italy .....	31 943	16 848	14 475	31 323	(-) 620
Netherlands .....	10 741	5 546	5 100	10 646	(-) 95
Poland .....	6 914	3 884	2 902	6 786	(-) 128
Yugoslavia .....	9 003	5 135	3 931	9 066	63
Other .....	22 679	11 339	9 492	20 831	(-) 1 848
Total Europe .....	269 261	132 666	127 034	259 700	(-) 9 561
Other countries .....	19 842	19 913	19 105	39 018	19 176
At Sea .....	18	10	12	22	4
Total born outside Australia .....	293 219	155 943	149 415	305 358	12 139
Total (including Not Stated) .....	1 244 754	635 696	649 337	1 285 033	40 279

(a) Census count not adjusted for underenumeration.

## Religion

Information on the religious affiliations of the population is obtained only at population censuses. There is, however, no legal obligation to answer the question on religion and at the 1981 Census respondents representing approximately 10.6 per cent of the South Australian population chose not to answer.

The Anglican Church has always had the greatest number of adherents, its relative importance having been fairly consistent since 1866 when it accounted for 31.8 per cent of persons compared with 20.3 per cent in 1981.

Changes in the pattern of religious affiliation appear to some extent attributable to migratory movements. This is particularly noticeable in the case of Catholics (*i.e.* persons described as either Catholics or Roman Catholics) who accounted for only 14.3 per cent of the persons in 1933 compared with 19.9 per cent in 1981.

The proportion of persons claiming no religious affiliation has increased over the years, from 8.2 per cent of persons in 1971 to 13.9 per cent in 1981.

**Religious Denomination of Persons, South Australia <sup>(a)</sup>**

Religious Denomination	Census 30 June 1976		Census 30 June 1981	
	Persons	Proportion of Total	Persons	Proportion of Total
Christian:		Per cent		Per cent
Anglican .....	275 338	22.1	260 919	20.3
Baptist .....	22 004	1.8	22 287	1.7
Catholic, Roman Catholic <sup>(b)</sup> .....	247 572	19.9	255 332	19.9
Lutheran .....	62 344	5.0	63 860	5.0
Methodist .....	195 890	15.7	85 935	6.7
Presbyterian .....	34 778	2.8	21 725	1.7
Uniting Church .....			108 857	8.5
Other Christian .....	136 454	11.0	138 350	10.8
Total Christian .....	974 381	78.3	957 265	74.5
Non-Christian:				
Buddhist .....	<i>n.a.</i>	<i>n.a.</i>	2 229	0.2
Hebrew .....	1 072	0.1	1 114	0.1
Muslim .....	1 031	0.1	1 456	0.1
Other Non-Christian .....	2 747	0.2	2 329	0.2
Total Non-Christian .....	4 849	0.4	7 128	0.6
Indefinite .....	5 528	0.4	6 529	0.5
No religion <sup>(b)</sup> .....	140 070	11.3	178 136	13.9
Not stated .....	119 930	9.6	135 970	10.6
Total .....	1 244 758	100.0	1 285 033	100.0

(a) Census count not adjusted for underenumeration. (b) So described in individual census schedules.

**Educational Attainment****Schooling History**

At the 1981 Census information was sought on the age at which people aged 15 years and over left school. The following table summarises the answers to this question.

**Schooling History of Persons Aged 15 Years and Over, South Australia****Census 1981 <sup>(a)</sup>**

Age Left School (Years)	Males	Females	Persons	Proportion of Total
Persons aged 15 years and over:				Per cent
Age left school:				
12 years or younger .....	13 985	15 522	29 507	3.02
13 .....	16 660	18 365	35 025	3.58
14 .....	98 768	109 435	208 203	21.28
15 .....	99 170	116 330	215 500	22.02
16 .....	101 855	109 551	211 406	21.61
17 .....	69 803	66 693	136 496	13.95
18 .....	27 984	18 211	46 195	4.72
19 .....	11 384	5 704	17 088	1.75
Never attended school .....	2 762	3 828	6 590	0.67
Not stated .....	15 962	17 134	33 096	3.38
Still attending .....	20 202	19 148	39 350	4.02
Total 15 years of age and over .....	478 535	499 921	978 456	100.0

(a) Census count not adjusted for underenumeration.

**Educational Qualifications**

At the 1976 and 1981 Censuses information was sought on the type of educational qualification obtained. The following table shows that of total persons 15 years of age

and over in 1976, only 21.2 per cent had obtained any educational qualifications since leaving school, but this proportion had risen to 23.8 per cent in 1981.

### Educational Qualifications of Persons Aged 15 Years and Over, South Australia <sup>(a)</sup>

Highest Level of Qualification Obtained	Census 1976	Census 1981		
	Persons	Males	Females	Persons
No qualification .....	630 498	299 636	388 095	687 731
Trade level .....	91 934	82 973	9 863	92 836
Technician level .....	37 701	25 881	32 726	58 607
Tertiary (excluding degrees) .....	30 431	15 208	20 228	35 436
Bachelor degree, post graduate-diploma or equivalent .....	20 691	20 863	11 195	32 058
Higher degree level or equivalent .....	2 652	3 207	819	4 026
Inadequately described .....	10 623	919	1 359	2 278
Total with qualifications .....	194 032	149 051	76 190	225 241
Not stated .....	90 160	29 848	35 636	65 484
Total 15 years of age and over .....	914 690	478 535	499 921	978 456

(a) Census count not adjusted for underenumeration.

### Family Structures

The following table indicates the significant changes in family composition in recent years. There has been substantial growth in the number of single person and single parent families, while the proportion of families comprising a head, spouse and dependent children has declined to 27.7 per cent. The number of larger family groups, containing adults other than the head and spouse, has declined despite a growth of 10.8 per cent in the number of families.

### Changing Family Structure, South Australia Census 1976 and 1981

Family Type	1976		1981		Percentage Change
	No.	Per cent	No.	Per cent	
Head only (male) .....	31 140	7.8	42 384	9.6	36.1
Head only (female) .....	43 768	11.0	57 209	13.0	30.7
Head (male) and dependants only .....	2 336	0.6	3 053	0.7	30.7
Head (female) and dependants only .....	12 208	3.1	19 873	4.5	62.8
Head and spouse only .....	94 200	23.7	105 270	23.9	11.8
Head, spouse and dependants only .....	115 364	29.0	122 227	27.7	5.9
Head and other adults only .....	16 764	4.2	18 658	4.2	11.3
Head, other adults and dependants .....	5 442	1.4	5 580	1.3	2.5
Head, spouse and other adults only .....	36 736	9.2	35 833	8.1	(-) 2.5
Head, spouse, other adults and dependants .....	39 860	10.0	30 774	7.0	(-) 22.8
Total .....	397 818	100.0	440 861	100.0	10.8

The next table shows that 59 per cent of single person families and 72 per cent of single parent families had an income of less than \$155 per week.



## Weekly Family Income by Family Type, South Australia, Census 1981

Family Type	Weekly Family Income(a)							Total Families	
	None	\$77	\$78-154	\$155-231	\$232-500	\$501 and over	Not Stated		
	Per cent							No.	Per cent
Head only .....	2	39	18	19	19	1	2	99 593	100
Head and dependants .....	4	18	50	14	12	1	2	22 926	100
Head and spouse only .....	1	1	32	15	35	12	5	105 270	100
Head, spouse and dependants .....	0.3	1	7	18	54	13	7	122 227	100
Head and other adults only .....	2	44	19	18	14	1	2	18 658	100
Head, other adults and dependants .....	3	20	45	17	13	1	2	5 580	100
Head, spouse and other adults .....	0.5	1	20	17	44	11	6	35 833	100
Head, spouse, other adults and dependants .....	0.4	1	10	17	52	13	6	30 771	100
Total .....	1	13	20	17	36	9	5	440 861	100

(a) Family income is the combined income of head and spouse if present.

## 5.5 BIRTHS AND DEATHS

Compulsory registration of births and deaths was first provided in South Australia in 1842 when an Act 'for registering births, deaths and marriages in the Province of South Australia' was passed. Current legislation is contained in the Births, Deaths and Marriages Registration Act, 1966-1975 which came into operation on 1 January 1968. The administration of the Act is the responsibility of the Principal Registrar of Births, Deaths and Marriages. For registration purposes the State is divided into twenty-two registration districts each of which has a registry office in the charge of a District Registrar.

The Principal Registrar maintains a register of all live births and of all deaths registered in the State and each District Registrar maintains, in a register, duplicate copies of the registrations of births and deaths which occurred in the district under his jurisdiction. Up to the end of 1967 separate registers were kept of still births, which were not included in the registration or statistics of either live births or deaths. Compulsory registration of still births was introduced in South Australia in 1937.

The current legislation does not require the Principal Registrar to maintain a register of still births, but it provides for a 'Medical Certificate of Cause of Perinatal Death' to be filled in and forwarded to the Principal Registrar by the attending medical practitioner in respect of a 'child not born alive of at least twenty weeks gestation or four hundred grams weight'. The 'perinatal' certificates are also required from attending medical practitioners for children dying within twenty-eight days of birth.

The birth of each live-born child is required to be registered by a parent within sixty days of the date of birth. Registration of a live birth after the expiration of sixty days following the date of birth requires the payment of a fee and a declaration in a form prescribed by the Act.

A death must be registered within fourteen days of the date of death by the occupier of the building or place in which the death occurred. Special provisions and penalties exist for the late registration of a death. A body may not be buried unless the undertaker is in possession of a 'Notice of signing of Medical Certificate of Cause of Death' signed by a medical practitioner or of an order by a coroner for burial, and the undertaker is required within seven days of the disposal of the body to notify the Principal Registrar of such disposal.

Births and deaths of Aborigines when registered are incorporated in registers, but to the end of 1965 were excluded from statistics where there was definite indication that they were of full-blood. Statistics of births and deaths for 1966 and subsequent years cover all registrations.

In accordance with international practice, statistics for a period are on the basis of the births and deaths which were registered during that period. However, numbers registered in a period usually differ from the number of occurrences in the same period and, mainly because of the longer period allowed for registration, such variations generally are more apparent in birth than in death figures.

In this section details of births and deaths for years up to and including 1982 are on the basis of State or Territory of registration of the event (*i.e.* South Australia). However from 1983 onwards births data are on the basis of State of usual residence of the mother and deaths data are on the basis of State of usual residence of the deceased. While the 1983 data are not strictly comparable with those for previous years, the difference is considered to be relatively insignificant for most purposes. Some usual State of residence data for years before 1983 are available on request from the Australian Bureau of Statistics.

In the tables which follow births to mothers usually resident in South Australia which took place overseas are excluded, while births to mothers usually resident overseas that occurred in South Australia are included. Similarly deaths of South Australian residents which occurred overseas are excluded and deaths of persons usually resident overseas that occurred in South Australia are included.

### BIRTHS

The South Australian birth rate per thousand of mean estimated resident population during 1983 was 14.8 compared with the Australian rate of 15.8. The lowest ever recorded rate of 14.13 was established in 1935.

#### Live Births Occurred and Registered, South Australia

Year	Total Live Births Occurred (a)	Live Births Registered				
		Total	Rate (b)	Males	Females	Masculinity (c)
1978 .....	18 407	18 558	14.32	9 496	9 062	104.79
1979 .....	18 229	18 478	14.20	9 520	8 958	106.27
1980 .....	18 491	18 499	14.14	9 462	9 037	104.70
1981 .....	19 041	19 351	14.68	9 816	9 535	102.94
1982 .....	18 355	19 294	14.52	9 958	9 336	106.66
1983 .....	18 956	19 830	14.78	10 211	9 619	106.15

(a) Figures are subject to the addition of late registrations, particularly to 1983.

(b) Number per 1 000 of mean estimated resident population.

(c) Number of male births per 100 female births.

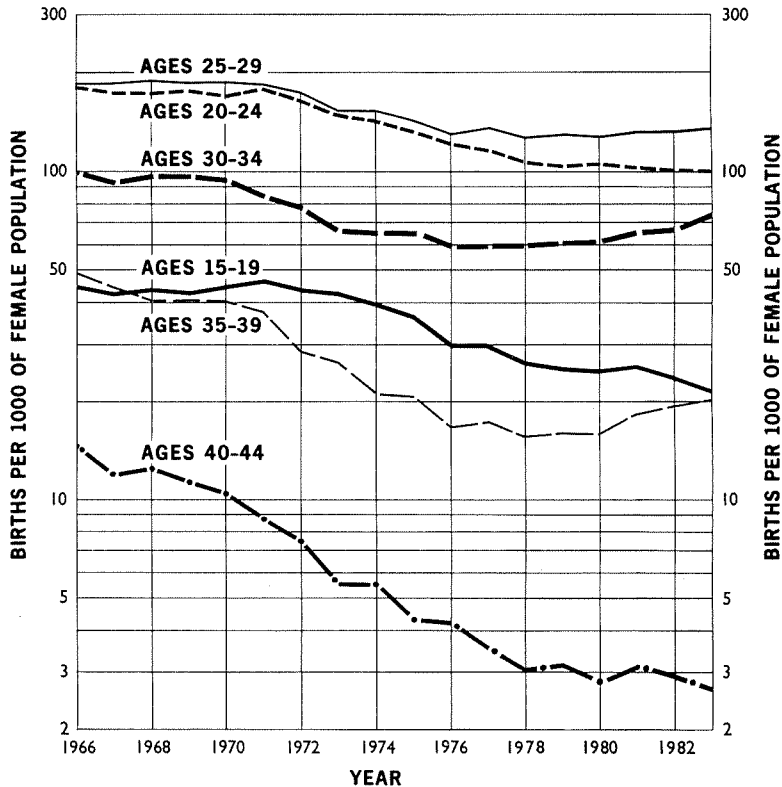
#### Age-specific Birth Rates

One significant feature of age-specific birth rates is that whereas in 1961, females in the 20-24 years age group accounted for the highest number of births, this can now be attributed to those in the 25-29 years age group. Also, a general decline in the fertility of women of all ages is evident, particularly in the older age groups. In general total fertility has decreased, reflecting the tendency toward smaller families.

## AGE - SPECIFIC BIRTH RATES

SOUTH AUSTRALIA 1966 TO 1983

SEMI-LOGARITHMIC GRAPH

Age-specific Birth Rates and Total Fertility, South Australia <sup>(a)</sup> <sup>(b)</sup>

Year	Age Group (Years)							Total Fertility
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	
	Annual Rates							
1961(c) .....	46.66	246.12	235.33	135.45	65.04	19.54	1.48	3.74
1966(c) .....	44.56	178.73	181.58	99.31	49.30	14.62	0.75	2.84
1971(c) .....	46.70	179.03	186.66	82.68	37.14	8.69	0.55	2.70
1976(c) .....	29.63	126.52	137.40	59.16	17.32	4.24	0.25	1.87

Age-specific Birth Rates and Total Fertility, South Australia <sup>(a) (b)</sup> (continued)

Year	Age Group (Years)						Total Fertility
	15-19	20-24	25-29	30-34	35-39	40-44	
	Annual Rates						
1978 .....	27.17	111.30	135.92	60.40	16.94	3.08	1.77
1979 .....	25.57	106.12	136.44	60.94	16.93	3.16	1.74
1980 .....	25.45	106.54	133.46	61.55	16.77	2.83	1.73
1981 (c) .....	26.35	104.62	140.28	65.26	18.78	3.10	1.79
1982 .....	23.99	101.25	139.69	68.16	19.57	2.95	1.77
1983 .....	23.71	100.35	141.96	73.25	20.32	2.74	1.81

(a) Excludes particulars of full-blood Aborigines before 1966. (b) Number of live births per 1 000 of estimated female population in each age group: From 1976 the estimated female resident population. (c) Census year.

## Gross and Net Reproduction Rates

The gross reproduction rate is an indication of the number of live females that can be expected to be born to a woman through her child-bearing years. The net reproduction rate, which is a measure of the degree to which the population can replace itself, is derived from the gross reproduction rate by taking into account the females who fail to survive to the end of their child-bearing period. The following table shows a general decline in the net reproduction rate, which reached a low point of 0.830 in 1979, and has fluctuated since then. The current level is lower than the point at which women produce only one female child to take their place in the reproductive cycle and, excluding the impact of migration, if this trend continued, zero population growth would ultimately be reached. It should be realised, however, that these figures are not a forecast of what can be anticipated but only a hypothetical projection of what would happen if the given conditions upon which they have been based continued to apply.

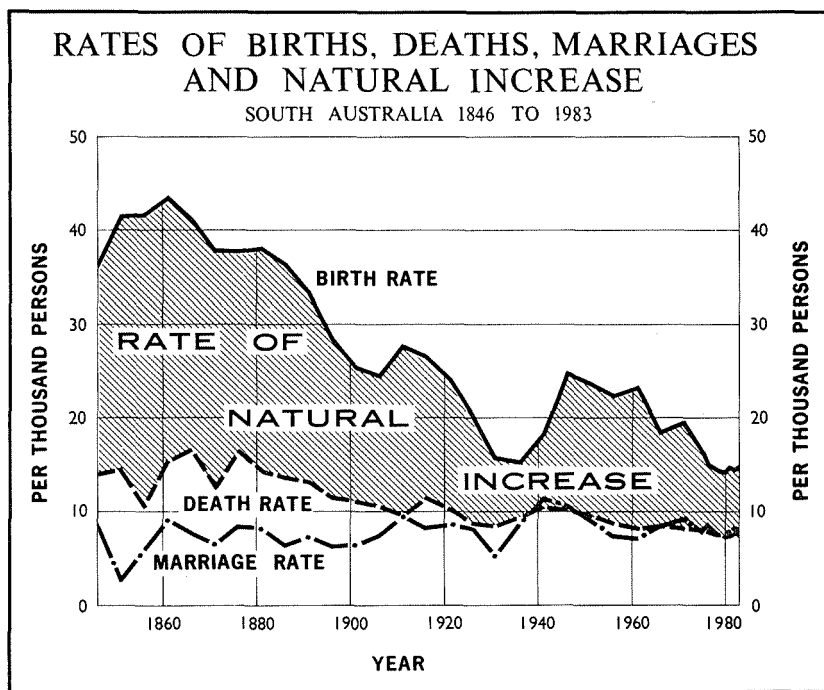
## Gross and Net Reproduction Rates, South Australia

Year	Gross Reproduction Rate	Net Reproduction Rate	
		Rate	Mortality Experience on Which Rate is Based
1961 (a) .....	1.841	1.781	1960-1962
1966 (a) .....	1.368	1.323	1965-1967
1971 (a) .....	1.318	1.281	1970-1972
1976 (a) .....	0.900	0.880	1975-1977
1978 .....	0.867	0.848	1978
1979 .....	0.847	0.830	1979
1980 .....	0.847	0.831	1980
1981 (a) .....	0.883	0.867	1981
1982 .....	0.861	0.845	1981
1983 .....	0.879	0.864	1981

(a) Census year.

## Ex-nuptial Births and Legitimations

Since 1960 there has been a marked increase in the number and rate of ex-nuptial births. For the previous forty years, the rate remained relatively steady at about three



per hundred live births, but in recent years the rate has increased sharply, reaching a record level of 14.31 per hundred live births in 1983.

The legitimization of an ex-nuptial child upon the subsequent marriage of the parents which was first provided for in South Australia by the Legitimation Act, 1898, was possible only if there was no legal impediment to the marriage of the parents at the time of the birth of the child.

The *Marriage Act 1961*, which came into operation on 1 September 1963, provides for the legitimization of a child upon the subsequent marriage of the parents whether or not there was a legal impediment to the marriage at the time of the birth of the child. Legitimations under this Act take place whether or not the child was living at the time of marriage, and the child is considered legitimate from the date of birth or, in the case of a child born before 1 September 1963, at that date.

## Ex-nuptial Live Births and Legitimizations, South Australia

Year	Ex-nuptial Births			Rate per 100 Live Births	Legitimizations
	Males	Females	Total		
1978 .....	1 038	1 012	2 050	11.05	328
1979 .....	1 087	1 011	2 098	11.35	277
1980 .....	1 172	1 129	2 301	12.44	277
1981 .....	1 293	1 199	2 492	12.88	285
1982 .....	1 301	1 220	2 521	13.07	331
1983 .....	1 457	1 380	2 837	14.31	323

## Confinements and Live Births

In the table below confinements in each of the years 1980 to 1983 have been shown in relation to age group of the mother and nuptiality.

Confinements: Age Group of Mother and Nuptiality, South Australia <sup>(a)</sup>

Age Group (Years)	Number of Confinements				Percentage of Total in Each Category			
	1980	1981	1982	1983	1980	1981	1982	1983
NUPTIAL CONFINEMENTS								
10-14 .....	1	—	—	—	—	—	—	—
15-19 .....	667	654	523	451	4.2	3.9	3.1	2.7
20-24 .....	5 138	5 069	4 872	4 798	32.0	30.4	29.4	28.5
25-29 .....	6 605	6 938	6 963	7 057	41.2	41.6	42.0	41.9
30-34 .....	2 931	3 227	3 325	3 579	18.3	19.3	20.0	21.2
35-39 .....	600	703	816	890	3.7	4.2	4.9	5.3
40-44 .....	85	96	93	84	0.5	0.6	0.6	0.5
45 and over .....	7	5	—	2	—	—	—	—
Not stated .....	—	—	—	—	—	—	—	—
Total .....	16 034	16 692	16 592	16 861	100.0	100.0	100.0	100.0
EX-NUPTIAL CONFINEMENTS								
10-14 .....	6	6	6	15	0.3	0.2	0.2	0.5
15-19 .....	806	847	813	845	35.4	34.3	32.6	30.0
20-24 .....	816	870	908	1 029	35.8	35.2	36.3	36.6
25-29 .....	400	478	474	560	17.6	19.4	19.0	19.9
30-34 .....	178	186	214	265	7.8	7.5	8.6	9.4
35-39 .....	58	68	67	81	2.5	2.8	2.7	2.9
40-44 .....	12	14	13	18	0.5	0.6	0.5	0.6
45 and over .....	1	—	3	—	—	—	0.1	—
Not stated .....	—	—	—	1	—	—	—	—
Total .....	2 277	2 469	2 498	2 814	100.0	100.0	100.0	100.0

(a) Includes only those confinements which resulted in one or more live births.

The next table shows the number of confinements and live births for 1982 and 1983 classified separately for single births and multiple births in which at least one issue was live-born. Multiple confinements registered in South Australia during 1983 comprised 152 cases of twins and 4 cases of triplets, representing an average of 7.9 multiple confinements per 1 000 confinements.

Confinements and Live Births: Class of Birth, South Australia <sup>(a)</sup>

Particulars	1982				1983			
	Confinements	Live Births			Confinements	Live Births		
		Male	Female	Total		Male	Female	Total
<b>Nuptial:</b>								
Single births .....	16 402	8 455	7 947	16 402	16 729	8 618	8 111	16 729
Twins .....	187	199	163	362	129	132	123	255
Triplets .....	3	3	6	9	3	4	5	9
Total nuptial .....	16 592	8 657	8 116	16 773	16 861	8 754	8 239	16 993
<b>Ex-nuptial:</b>								
Single births .....	2 475	1 283	1 192	2 475	2 790	1 434	1 356	2 790
Twins .....	23	18	28	46	23	22	22	44
Triplets .....	—	—	—	—	1	1	2	3
Total ex-nuptial .....	2 498	1 301	1 220	2 521	2 814	1 457	1 380	2 837
Total .....	19 090	9 958	9 336	19 294	19 675	10 211	9 619	19 830

(a) Includes only those confinements which resulted in one or more live births.

Nuptial confinements classified according to the relative age groups of the parents, and ex-nuptial confinements classified to the age group of the mother are shown for 1983 in the following table.

Confinements: Relative Ages of Parents, South Australia, 1983 <sup>(a)</sup>

Age Group of Father (Nuptial Births) (Years)	Age Group of Mother (Years)							Total
	Under 20	20-24	25-29	30-34	35-39	40-44	45 and Over	
Under 20 .....	45	20	2	—	—	—	—	67
20-24 .....	290	1 773	257	21	6	—	—	2 347
25-29 .....	89	2 381	3 677	408	34	—	—	6 589
30-34 .....	19	476	2 361	1 954	163	5	—	5 178
35-39 .....	6	109	459	951	424	20	—	1 969
40-44 .....	2	26	72	178	181	24	—	483
45-49 .....	—	11	18	37	53	23	1	143
50 and over .....	—	2	11	30	29	12	1	85
<b>Mothers:</b>								
Married .....	451	4 798	7 057	3 579	890	84	2	16 861
Unmarried .....	860	1 030	560	265	81	18	—	2 814
Total .....	1 311	5 828	7 617	3 844	971	102	2	19 675

(a) Includes only those confinements which resulted in one or more live births.

Since 1970 the proportion of nuptial first live births has remained fairly constant at about 40 per cent of total nuptial births registered. However, between 1973 and 1983 the number of fourth or subsequent children born into existing marriages declined from 1 661 to 1 038, a fall from 8.9 to 6.1 per cent of total nuptial births registered. These figures reflect the decline in the average number of children born into the family unit.

The table which follows shows the number of confinements classified by duration of marriage and previous issue. Previous issue is the number of live-born children of the existing marriage born before the current confinement.

**Nuptial Confinements: Duration of Marriage and Previous Issue of Mother**  
**South Australia, 1983 <sup>(a)</sup>**

Duration of Marriage	Number of Confinements (b)	Previous Issue of Marriage						
		0	1	2	3	4	5	6 and Over
Under 1 year .....	1 517	1 335	157	20	4	1	—	—
1 year .....	1 898	1 576	295	23	2	1	—	1
2 years .....	1 891	1 144	681	56	7	1	1	1
3 years .....	1 916	870	929	106	10	1	—	—
4 years .....	1 709	616	861	214	15	3	—	—
5 years .....	1 589	498	801	242	43	3	2	—
6 years .....	1 421	356	687	317	56	5	—	—
7 years .....	1 228	230	561	344	85	7	1	—
8 years .....	1 038	183	433	320	79	20	3	—
9 years .....	817	117	292	278	102	23	4	1
10 years .....	558	72	190	190	72	27	5	2
11 years .....	390	37	112	157	66	8	7	3
12 years .....	278	30	64	99	57	17	8	3
13 years .....	226	18	39	85	57	21	4	2
14 years .....	138	10	23	52	33	13	4	3
15 years and over .....	246	14	32	56	56	29	24	35
Not stated .....	1	—	1	—	—	—	—	—
Total .....	16 861	7 106	6 158	2 559	744	180	63	51

(a) Includes only those confinements which resulted in one or more live births.

(b) Includes previous issue not stated.

**Nuptial First Live Births: Duration of Marriage of Parents, South Australia**

Duration of Marriage	Nuptial First Live Births				Percentage of Total			
	1980	1981	1982	1983	1980	1981	1982	1983
Under 5 months ....	409	442	407	314	5.92	6.04	5.66	4.42
5 months .....	239	260	246	210	3.46	3.55	3.42	2.96
6 months .....	152	183	180	232	2.20	2.50	2.50	3.26
7 months .....	75	91	82	105	1.09	1.24	1.14	1.48
8 months .....	95	109	112	88	1.38	1.49	1.56	1.24
9 months .....	101	145	133	118	1.46	1.98	1.85	1.66
10 months .....	131	137	145	129	1.90	1.87	2.02	1.82
11 months .....	140	145	162	139	2.03	1.98	2.25	1.96
Total under 1 year	1 342	1 512	1 467	1 335	19.42	20.66	20.40	18.79
1 year .....	1 407	1 525	1 485	1 576	20.46	20.84	20.65	22.18
2 years .....	1 069	1 107	1 142	1 144	15.50	15.13	15.88	16.10
3 years .....	922	896	923	870	13.36	12.24	12.84	12.24
4 years .....	744	724	645	616	10.78	9.89	8.97	8.67
5 years .....	513	519	528	498	7.43	7.09	7.34	7.01
6 years .....	379	401	380	356	5.49	5.48	5.29	5.01
7 years .....	223	265	235	230	3.23	3.62	3.27	3.24
8 years and over ....	297	365	384	481	4.30	4.99	5.34	6.77
Not stated .....	—	5	1	—	0.07	0.07	0.01	—
Total .....	6 901	7 319	7 190	7 106	100.00	100.00	100.00	100.00

From the mid-1960s there has been a trend towards a longer period after marriage before the birth of the first child. More recently, there has been a decrease in the percentage of nuptial first live births to women who had been married less than two years, from 52.25 per cent in 1973 to 40.97 per cent in 1983.



A corresponding increase is evident in the five years and over duration of marriage groups; from 9.22 per cent to 22.02 per cent.

### DEATHS

The 9 869 deaths registered for South Australia during 1983 represented a crude death rate of 7.36 per thousand of mean population. Although crude death rates in excess of 16.0 were recorded in the 1860s, the rate has not exceeded 9.0 since 1956. Other fluctuations in the number of deaths and the crude death rate over time can be seen in the Statistical Summary, Appendix A.

#### Deaths: Numbers Registered and Rates, South Australia

Year	Numbers Registered			Crude Death Rate (a)		
	Males	Females	Persons	Males	Females	Persons
1978 .....	5 475	4 288	9 763	8.49	6.58	7.53
1979 .....	5 323	4 338	9 661	8.23	6.63	7.42
1980 .....	5 279	4 301	9 580	8.12	6.53	7.32
1981 .....	5 372	4 334	9 706	8.22	6.52	7.36
1982 .....	5 765	4 692	10 457	8.75	7.00	7.87
1983 .....	5 465	4 404	9 869	8.22	6.51	7.36

(a) Number of deaths per 1 000 of mean estimated resident population.

#### Deaths: Numbers Registered in Age Groups, South Australia

Age Group	Males			Females			Persons		
	1981	1982	1983	1981	1982	1983	1981	1982	1983
Under 1 year .....	97	135	109	60	86	74	157	221	183
1 year .....	4	10	9	7	5	3	11	15	12
2 years .....	2	5	7	3	6	7	5	11	14
3 years .....	5	3	3	—	2	9	5	5	12
4 years .....	2	4	4	—	4	—	2	8	4
Total under 5 years ...	110	157	132	70	103	93	180	260	225
5-9 years .....	16	24	12	5	6	10	21	30	22
10-14 years .....	16	24	14	9	13	7	25	37	21
15-19 years .....	77	61	77	28	17	23	105	78	100
20-24 years .....	63	75	92	20	23	25	83	98	117
25-29 years .....	66	67	75	17	21	28	83	88	103
30-34 years .....	50	63	67	17	23	30	67	86	97
35-39 years .....	73	66	56	34	40	48	107	106	104
40-44 years .....	75	69	83	46	64	39	121	133	122
45-49 years .....	146	131	134	77	58	69	223	189	203
50-54 years .....	273	262	218	107	112	123	380	374	341
55-59 years .....	436	444	426	198	185	186	634	629	612
60-64 years .....	501	590	550	249	272	271	750	862	821
65-69 years .....	748	809	714	403	397	377	1 151	1 206	1 091
70-74 years .....	838	874	852	547	546	528	1 385	1 420	1 380
75-79 years .....	760	841	813	616	676	662	1 376	1 517	1 475
80-84 years .....	571	610	638	723	794	734	1 294	1 404	1 372
85-89 years .....	357	353	331	644	733	640	1 001	1 086	971
90-94 years .....	157	197	131	396	442	359	553	639	490
95 years and over .....	39	48	50	128	167	152	167	215	202
All ages .....	5 372	5 765	5 465	4 334	4 692	4 404	9 706	10 457	9 869

A long established trend of increases in the number of deaths at the higher ages has been offset to some degree by a decrease in those in the younger age groups. The effect of this trend related to the changes in age distribution of the population is illustrated in the next tables, which show age-specific death rates, *i.e.* deaths in each age group

expressed as a rate per 1 000 of the population in that age group. Because age constitution of the population is known accurately only at censuses, the periods shown are those with a census date as their centre.

### Age-specific Death Rates: Males, South Australia <sup>(a)</sup>

Age Group (Years)	Death Rate (b)							
	1920-22	1932-34	1946-48	1960-62	1965-67	1970-72	1975-77	1980-82
0-4 .....	19.98	9.90	8.09	5.82	4.58	4.66	3.20	2.76
5-9 .....	2.33	1.18	1.00	0.50	0.44	0.43	0.36	0.33
10-14 .....	1.55	1.08	0.68	0.46	0.55	0.38	0.36	0.38
15-19 .....	2.41	1.69	1.42	1.08	1.19	1.48	1.51	1.27
20-24 .....	3.47	2.35	1.44	1.37	1.33	1.55	1.56	1.25
25-29 .....	3.67	2.51	1.59	1.59	1.34	1.12	1.27	1.19
30-34 .....	3.97	2.51	1.88	1.62	1.13	1.41	1.23	1.07
35-39 .....	5.12	3.23	2.41	2.08	2.23	2.04	1.72	1.57
40-44 .....	6.10	4.73	3.63	3.43	3.27	3.15	2.60	2.29
45-49 .....	8.37	6.82	6.12	5.44	5.71	5.49	5.05	4.16
50-54 .....	11.58	9.82	10.74	9.24	9.59	9.37	8.15	7.47
55-59 .....	18.99	15.11	16.28	15.75	15.92	16.01	13.22	12.76
60-64 .....	26.02	24.98	26.08	24.39	26.69	25.10	22.33	19.52
65-69 .....	41.62	36.14	40.08	37.84	40.55	41.00	36.05	31.09
70-74 .....	62.49	57.07	60.79	59.47	63.86	64.42	54.08	49.09
75-79 .....	105.50	92.60	97.69	88.56	90.71	96.09	87.50	78.54
80-84 .....	158.90	147.86	145.56	135.85	138.50	142.39	132.63	117.92
85 and over .....	269.50	257.03	248.89	227.39	228.91	230.02	211.49	201.85
All ages .....	10.75	9.29	10.87	9.00	9.17	9.31	8.52	8.36

(a) Deaths of full-blood Aboriginals where identified in registrations were excluded before 1966.

(b) Average annual number of deaths per 1 000 of population at ages shown: from 1975-77 estimated resident population.

### Age-specific Death Rates: Females, South Australia <sup>(a)</sup>

Age Group (Years)	Death Rate (b)							
	1920-22	1932-34	1946-48	1960-62	1965-67	1970-72	1975-77	1980-82
0-4 .....	16.29	8.29	7.12	3.93	3.47	3.39	2.49	2.00
5-9 .....	2.30	1.04	0.54	0.35	0.33	0.32	0.35	0.14
10-14 .....	1.32	0.88	0.38	0.30	0.29	0.29	0.21	0.17
15-19 .....	2.71	1.25	0.75	0.37	0.44	0.65	0.55	0.45
20-24 .....	2.91	2.36	1.04	0.58	0.46	0.48	0.44	0.44
25-29 .....	3.95	2.73	1.65	0.70	0.53	0.60	0.42	0.36
30-34 .....	4.18	2.66	1.91	0.96	0.87	0.91	0.66	0.42
35-39 .....	5.27	3.85	2.03	1.33	1.14	1.18	0.91	0.85
40-44 .....	4.99	4.10	3.48	1.80	2.13	1.86	1.83	1.44
45-49 .....	6.42	5.80	4.59	3.03	3.29	2.95	2.73	2.12
50-54 .....	9.18	8.06	7.09	5.22	4.99	4.60	4.32	3.39
55-59 .....	10.65	11.24	10.33	7.82	7.59	7.41	6.48	5.31
60-64 .....	18.07	17.68	14.97	12.74	12.82	12.16	10.45	8.53
65-69 .....	33.15	27.16	25.22	21.05	20.39	20.32	16.53	14.61
70-74 .....	46.20	42.19	42.17	35.52	35.36	33.42	28.77	24.95
75-79 .....	83.56	75.53	72.07	58.28	60.81	57.60	51.55	42.39
80-84 .....	131.63	121.15	121.57	108.61	100.52	99.42	84.68	75.39
85 and over .....	232.84	233.59	214.35	199.38	183.88	186.55	176.26	163.02
All ages .....	9.00	8.23	9.19	7.38	7.42	7.50	7.03	6.69

(a) Deaths of full-blood Aboriginals where identified in registrations were excluded before 1966.

(b) Average annual number of deaths per 1 000 of population at ages shown: from 1975-77 estimated resident population.

## CAUSES OF DEATH

The classification of causes of deaths in Australia since 1907 has been based on the International Classification of Diseases (ICD). Up to 1949 revisions to ICD were negligible but the introduction in 1950 of the Sixth Revision (ICD6) introduced major changes which, together with the adoption of more flexible rules for selecting the

underlying cause where certificates of cause of death showed more than one cause affected the comparability of figures for years before 1950 with those for 1950 and later. A complete classification of causes of deaths for each State and Territory of Australia for 1950 according to both the Fifth and Sixth Revisions was published by the Australian Statistician in *Demography* 1950, Bulletin No. 68. The Seventh Revision (ICD7) adopted in Australia in 1958, did not affect comparability significantly.

Similarly, the Eighth Revision (ICD8), adopted ten years later in 1968, provided few changes beyond the transfer of some categories, e.g. cerebrovascular disease from diseases of the nervous system to diseases of the circulatory system, and a revised classification for the recording of perinatal morbidity and mortality.

The Ninth Revision (ICD9) was introduced in 1979 and while not departing radically from ICD8 in its structure was more detailed in many classifications. The most significant feature of ICD9 relevant to causes of death is that maternal condition codes from the section 'Certain conditions originating in the perinatal period' are not available for Infant Deaths but may be used for Perinatal Deaths (*see* below).

In the following table deaths registered in 1983 are shown classified according to an abbreviated list, including percentages for each cause and the rate per 10 000 of mean estimated resident population.

### Causes of Death: South Australia, 1983

Abbreviated Classification (a)	ICD9 Code Number	Number of Deaths	Proportion of Total	Rate per 10 000 of Mean Estimated Resident Population
			Per cent	
S1 Intestinal infectious diseases .....	001-009	5	0.1	—
S2 Tuberculosis .....	010-018	7	—	—
S6 Septicaemia .....	038	7	0.1	0.1
S10 All other infective and parasitic diseases .....	{ Remainder 001-139 }	16	0.2	0.1
S11-S20 Malignant neoplasms .....	140-208	2 279	23.1	17.0
S21 Benign neoplasms and neoplasms of unspecified nature .....	210-239	20	0.2	0.1
S22 Diabetes mellitus .....	250	150	1.5	1.1
S23 Nutritional marasmus .....	261	1	—	—
S24 Other protein-calorie malnutrition .....	262, 263	18	—	—
S25 Anaemias .....	280-285	18	0.2	0.1
S26 Meningitis .....	320-322	3	—	—
S28 Chronic rheumatic heart disease .....	393-398	50	0.5	0.4
S29 Hypertensive disease .....	401-405	108	1.1	0.8
S30 Acute myocardial infarction .....	410	2 308	23.4	17.2
S31 Other ischaemic heart disease .....	411-414	629	6.4	4.7
S32 Other forms of heart disease .....	415, 416, 420-429	535	5.4	4.0
S33 Cerebrovascular disease .....	430-438	1 108	11.2	8.3
S34 Atherosclerosis .....	440	106	1.1	0.8
S35 Other diseases of circulatory system .....	417, 441-459	183	1.9	1.4
S36 Pneumonia .....	480-486	215	2.2	1.6
S37 Influenza .....	487	3	—	—
S38 Bronchitis, emphysema, asthma .....	490-493	185	1.9	1.4
S39 Other diseases of respiratory system .....	{ Remainder 460-519 }	271	2.7	2.0
S40 Ulcer of stomach and duodenum .....	531-533	69	0.7	0.5
S41 Appendicitis .....	540	2	—	—
S42 Chronic liver disease and cirrhosis .....	571	98	1.0	0.7
S43 Nephritis, nephrotic syndrome, nephrosis .....	580-589	62	0.6	0.5
S44 Hyperplasia of prostate .....	600	4	—	—
S46 Direct Obstetric death .....	640-646, 651-676	1	—	—
S48 Congenital anomalies .....	740-759	83	0.8	0.6
S49 Birth trauma .....	767	1	—	—
S50 Hypoxia, birth asphyxia and other respiratory conditions .....	768-770	37	0.4	0.3
S51 Other conditions originating in the perinatal period .....	{ Remainder 760-779 }	39	0.4	0.3

## Causes of Death: South Australia, 1983 (continued)

Abbreviated Classification (a)	ICD9 Code Number	Number of Deaths	Proportion of Total	Rate per 10 000 of Mean Estimated Resident Population
			Per cent	
S52 Symptoms, signs and ill-defined conditions .....	780-799	76	0.8	0.6
S53 All other diseases .....	{ Remainder }	529	5.4	4.0
	{ 001-799 }			
S54 Motor vehicle traffic accidents .....	E810-E819	267	2.7	2.0
S55 Accidental falls .....	E880-E888	77	0.8	0.6
S56 All other accidents .....	{ Remainder }	164	1.7	1.2
	{ E800-949 }			
S57 Suicide .....	E950-E959	139	1.4	1.0
S58 Homicide .....	E960-E969	17	0.2	0.1
Total all causes .....	..	9 869	100.0	73.6

(a) No deaths were recorded in 1983 in the following categories: S3 Whooping Cough (033), S4 Meningococcal infection (036), S5 Tetanus (037), S7 Smallpox (050), S8 Measles (055), S9 Malaria (084), S27 Acute rheumatic fever (390-392), S45 Abortion (630-639), S47 Other complications of pregnancy, childbirth and puerperium (647, 648), S59 All other external causes (E970-E999).

## Selected Causes of Death: Age Groups, South Australia, 1983

Age Group (Years)	Malignant Neoplasms (140-208)	Ischaemic Heart Disease (410-414)	Cerebro-vascular Disease (430-438)	Disease of Respiratory System (460-519)	Disease of Digestive System (520-579)	Accidents, Poisonings & Violence (E800-E999)	Total Deaths (All Causes)
MALES							
Under 25 .....	22	—	2	7	—	159	327
25-29 .....	7	1	1	—	2	58	75
30-34 .....	16	2	3	1	3	38	67
35-39 .....	7	9	—	1	5	25	56
40-44 .....	24	13	2	4	5	25	83
45-49 .....	39	36	3	5	8	24	134
50-54 .....	74	71	11	10	8	22	218
55-59 .....	129	151	23	14	28	39	426
60-64 .....	198	197	33	32	16	13	550
65-69 .....	195	281	52	54	17	22	714
70-74 .....	231	307	79	71	29	17	852
75-79 .....	184	279	85	76	27	17	813
80-84 .....	127	195	80	88	21	14	638
85 and over .....	65	145	87	66	22	5	512
All ages .....	1 318	1 687	461	429	191	478	5 465
FEMALES							
Under 25 .....	13	—	3	3	1	50	158
25-29 .....	4	1	1	—	—	19	28
30-34 .....	9	—	3	—	—	8	30
35-39 .....	20	4	4	3	1	8	48
40-44 .....	14	4	1	2	2	9	39
45-49 .....	33	9	6	1	4	7	69
50-54 .....	63	19	11	2	5	7	123
55-59 .....	85	39	18	5	6	8	186
60-64 .....	106	80	26	13	10	9	271
65-69 .....	109	122	35	27	13	6	377
70-74 .....	140	172	67	28	17	11	528
75-79 .....	149	226	114	30	12	12	662
80-84 .....	116	238	127	36	22	12	734
85 and over .....	100	336	231	92	40	18	1 151
All ages .....	961	1 250	647	245	133	186	4 404

## Selected Causes of Death: Age Groups, South Australia, 1983 (continued)

Age Group (Years)	Malignant Neoplasms (140-208)	Ischaemic Heart Disease (410-414)	Cerebro- vascular Disease (430-438)	Disease of Respiratory System (460-519)	Disease of Digestive System (520-579)	Accidents, Poisonings & Violence (E800-E999)	Total Deaths (All Causes)
PERSONS							
Under 25 .....	35	—	5	10	1	209	485
25-29 .....	11	2	2	—	2	77	103
30-34 .....	25	2	6	4	3	46	97
35-39 .....	27	13	4	4	6	34	104
40-44 .....	38	17	3	6	7	34	122
45-49 .....	72	45	9	6	12	32	203
50-54 .....	137	90	22	12	13	29	341
55-59 .....	214	190	41	19	34	47	612
60-64 .....	304	277	59	45	26	22	821
65-69 .....	304	403	87	81	30	28	1 091
70-74 .....	371	479	146	99	46	28	1 380
75-79 .....	333	505	199	106	39	29	1 475
80-84 .....	243	433	207	124	43	26	1 372
85 and over .....	165	481	318	158	62	23	1 663
All ages .....	2 279	2 937	1 108	674	324	664	9 869

The long-term trends in deaths and death rates from some of the main causes are discussed in the following pages. One of the factors affecting these trends has been the reduction of mortality in early childhood. This improvement has increased the number of persons reaching higher ages where the risk from degenerative diseases is greatest; consequently deaths from degenerative diseases now constitute a higher proportion of deaths than formerly.

## Infectious Diseases

In 1956 a poliomyelitis immunisation program began and since then the incidence of and deaths from this disease have declined (*see* Part 6.5).

There has been a long-term downward trend in deaths from respiratory tuberculosis. This has been assisted by the immunisation of schoolchildren and compulsory chest X-ray surveys of the population between 1952 and 1977, enabling early detection and therefore more effective treatment of the disease.

Deaths from certain infectious diseases over the period 1915 to 1983 are shown in the following table.

Deaths from Certain Infectious Diseases, South Australia <sup>(a)</sup>

Period	Respiratory Tuberculosis	Typhoid Fever	Scarlet Fever	Diphtheria	Whooping Cough	Acute Polio- myelitis	Measles
Annual Average:							
1915-19 .....	339	311	4	94	21	(b)	14
1925-29 .....	313	12	2	25	13	3	12
1935-39 .....	211	4	1	27	11	6	2
1945-49 .....	161	1	1	7	8	9	6
1955-59 .....	43	—	—	1	1	2	3
1965-69 .....	20	—	—	—	—	—	2
1970-74 .....	8	—	—	—	—	—	—
1975-79 .....	2	—	—	—	—	—	1
Year:							
1979 .....	2	—	—	—	—	—	1
1980 .....	4	—	—	—	—	—	—
1981 .....	3	—	—	—	—	—	1
1982 .....	3	—	—	—	—	—	—
1983 .....	2	—	—	—	—	—	—

(a) Deaths of full-blood Aborigines where identified in registrations were excluded before 1966.

(b) Not separately recorded.

**Malignant Neoplasms**

For 1950 and subsequent years, deaths from malignant neoplasms (generally known as 'cancer') have included those deaths classified to neoplasms of lymphatic and haematopoietic tissues. This latter group, which accounted for 250 of the 2 279 deaths attributed to malignant neoplasms in 1983, includes such diseases as lymphosarcoma, Hodgkin's disease, leukaemia and multiple myeloma.

The following table shows deaths from malignant neoplasms according to site of the disease for selected years.

**Malignant Neoplasms: Deaths, Site of Disease, South Australia <sup>(a)</sup>**

Site of Disease	1965	1970	1975	1980	1983
	Number				
Malignant neoplasm of:					
Lip, oral cavity and pharynx .....	20	35	33	49	50
Digestive organs and peritoneum .....	479	546	583	642	698
Respiratory and intrathoracic organs .....	(b) 201	(b) 291	(b) 381	462	479
Skin .....	34	44	48	51	59
Breast .....	107	146	171	164	167
Uterus .....	61	52	55	61	55
Other female genital organs .....	47	63	61	54	60
Male genital organs .....	84	110	142	153	130
Urinary organs .....	88	79	88	97	95
Brain and nervous system .....	50	43	54	66	81
Other and unspecified sites .....	84	83	107	106	155
Neoplasms of lymphatic and haematopoietic tissue .....	128	160	187	205	250
Total deaths .....	1 383	1 652	1 910	2 110	2 279
	Rate (c)				
Malignant neoplasm of:					
Lip, oral cavity and pharynx .....	0.19	0.30	0.27	0.37	0.37
Digestive organs and peritoneum .....	4.50	4.72	4.71	4.91	5.21
Respiratory and intrathoracic organs .....	(b) 1.89	(b) 2.51	(b) 3.08	3.53	3.57
Skin .....	0.32	0.38	0.39	0.39	0.44
Breast .....	1.01	1.26	1.38	1.25	1.25
Uterus .....	0.57	0.45	0.44	0.47	0.41
Other female genital organs .....	0.44	0.54	0.49	0.41	0.45
Male genital organs .....	0.79	0.95	1.15	1.17	0.97
Urinary organs .....	0.83	0.68	0.71	0.74	0.71
Brain and nervous system .....	0.47	0.37	0.44	0.50	0.60
Other and unspecified sites .....	0.79	0.72	0.86	0.81	1.16
Neoplasms of lymphatic and haematopoietic tissue .....	1.20	1.38	1.51	1.57	1.86
Total rate .....	13.00	14.26	15.43	16.13	16.99

(a) Deaths of full-blood Aborigines where identified in registrations were excluded before 1966.

(b) Respiratory organs only.

(c) Per 10 000 of mean population: from 1980 mean estimated resident population.

Malignant Neoplasms: Age-specific Death Rates, South Australia <sup>(a)</sup>

Age Group (Years)	Death Rate (b)						
	1932-34	1946-48	1960-62	1965-67	1970-72	1975-77	1980-82
MALES							
0-4 .....	—	0.49	1.02	1.14	1.27	0.88	0.77
5-14 .....	0.12	0.51	0.82	0.97	0.79	0.45	0.59
15-24 .....	0.31	0.07	0.86	0.90	0.90	0.84	0.62
25-34 .....	1.05	1.18	1.33	1.62	1.24	1.76	1.31
35-44 .....	3.36	2.57	4.29	3.72	5.36	3.66	4.92
45-54 .....	8.65	12.35	11.57	15.09	14.80	14.33	16.35
55-64 .....	35.41	32.77	36.52	43.46	43.94	42.82	48.35
65-74 .....	89.18	82.62	83.67	87.28	101.64	99.69	103.90
75 and over .....	147.57	148.98	142.29	151.06	175.14	193.41	191.15
All ages ....	11.40	13.60	12.86	14.09	15.69	16.33	19.09
FEMALES							
0-4 .....	0.30	0.41	0.79	0.57	0.57	0.13	0.59
5-14 .....	0.13	0.23	0.79	0.55	0.38	0.50	0.56
15-24 .....	0.25	0.40	0.46	0.82	0.56	0.45	0.47
25-34 .....	1.49	1.74	2.16	1.70	2.39	1.44	1.11
35-44 .....	6.32	4.42	6.66	5.68	4.88	5.26	5.20
45-54 .....	16.86	15.39	16.69	16.14	15.83	14.04	12.85
55-64 .....	34.61	30.12	28.19	30.33	30.90	29.13	28.28
65-74 .....	55.98	57.21	52.24	49.90	55.38	50.11	53.84
75 and over .....	115.15	108.52	99.76	94.61	102.54	109.64	103.17
All ages ....	11.37	13.12	12.68	12.30	13.13	13.29	14.03

(a) Deaths of full-blood Aborigines where identified in registrations were excluded before 1966.

(b) Average annual number of deaths per 10 000 of population at ages shown: from 1975-77 estimated resident population.

The above table shows how the age-specific death rates for malignant neoplasms have increased for older age groups while the following table indicates a general increase in deaths from the same causes. Therefore, it appears that the increase over the period in the all-ages rate is attributable in part to the increasing number of elderly people.

Deaths from Malignant Neoplasms, South Australia <sup>(a)</sup>

Period	Number of Deaths			Death Rate (b)		
	Males	Females	Persons	Males	Females	Persons
Annual Average:						
1950-54 .....	462	483	945	12.11	12.96	12.53
1960-64 .....	656	617	1 273	13.16	12.58	12.88
1970-74 .....	958	784	1 742	15.94	13.06	14.50
Year:						
1980 .....	1 230	880	2 110	18.93	13.37	16.13
1981 .....	1 226	947	2 173	18.75	14.25	16.48
1982 .....	1 287	974	2 261	19.54	14.53	17.01
1983 .....	1 318	961	2 279	19.83	14.20	16.99

(a) Deaths of full-blood Aborigines where identified in registrations were excluded before 1966.

(b) Number of deaths per 10 000 of mean population: from 1975 mean estimated resident population.

**Cerebrovascular Disease**

The increase in both numbers and rates of deaths from cerebrovascular disease (commonly referred to as 'a stroke') is further evidence of the effect of the increased proportion of the population at higher ages.

**Deaths from Cerebrovascular Disease, South Australia <sup>(a)</sup>**

Period	Number of Deaths			Death Rate <sup>(b)</sup>		
	Males	Females	Persons	Males	Females	Persons
<b>Annual Average:</b>						
1950-54 .....	404	553	957	10.62	14.82	12.70
1955-59 .....	481	614	1 095	10.89	14.27	12.55
1960-64 .....	490	645	1 135	9.83	13.16	11.48
1965-69 .....	567	731	1 298	10.21	13.26	11.73
1970-74 .....	582	808	1 390	9.72	13.46	11.59
1975-79 .....	547	780	1 327	8.55	12.09	10.33
<b>Year:</b>						
1979 .....	497	742	1 239	7.69	11.33	9.52
1980 .....	448	699	1 147	6.89	10.62	8.77
1981 .....	515	706	1 221	7.88	10.62	9.26
1982 .....	511	735	1 246	7.76	10.96	9.38
1983 .....	461	647	1 108	6.94	9.56	8.26

(a) Deaths of full-blood Aboriginals where identified in registrations were excluded before 1966.

(b) Number of deaths per 10 000 of mean population: from 1975 mean estimated resident population.

Although the rate generally has fallen since 1954, deaths from this cause constituted 16.1 per cent of deaths of persons aged seventy-five years and over in 1983. During the period 1930-34 deaths classified to this cause were only 8.6 per cent of all deaths, but during 1975-79 they were 13.5 per cent of all deaths.

**Diseases of the Heart**

The following table shows the number of deaths attributed to heart disease and rates per 10 000 of the mean population since 1950.

The percentage of total deaths classified to heart disease increased from 25.50 per cent in the period 1940-44 to 36.55 per cent during 1975-79. Apart from the effect of the ageing population, there are other factors which have influenced this large increase, namely changes in the mode of certification and classification, and improvement both in diagnosis and certification; therefore any comparison of numbers, rates and percentages of deaths from this cause over the period should be made only with caution.

**Deaths from Diseases of the Heart, South Australia <sup>(a)</sup>**

Period	Number of Deaths			Death Rate <sup>(b)</sup>		
	Males	Females	Persons	Males	Females	Persons
<b>Annual Average:</b>						
1950-54 .....	1 342	996	2 338	35.22	26.70	31.01
1955-59 .....	1 519	1 111	2 630	34.38	25.81	30.15
1960-64 .....	1 776	1 245	3 021	35.61	25.42	30.56
1965-69 .....	2 036	1 432	3 468	36.69	25.97	31.35



Deaths from Diseases of the Heart, South Australia <sup>(a)</sup> (continued)

Period	Number of Deaths			Death Rate (b)		
	Males	Females	Persons	Males	Females	Persons
Annual Average:						
1970-74 .....	2 080	1 503	3 583	34.70	25.02	29.85
1975-79 .....	2 043	1 550	3 593	31.95	24.03	27.97
Year:						
1978 .....	2 034	1 561	3 595	31.55	23.96	27.74
1979 .....	2 051	1 517	3 568	31.72	23.17	27.42
1980 .....	1 906	1 442	3 348	29.33	21.91	25.60
1981 .....	1 985	1 481	3 466	30.36	22.29	26.29
1982 .....	2 044	1 607	3 651	31.04	23.97	27.47
1983 .....	1 970	1 552	3 522	29.64	22.93	26.26

(a) Deaths of full-blood Aborigines where identified in registrations were excluded before 1966.

(b) Number of deaths per 10 000 of mean population: from 1975 mean estimated resident population.

## External Causes

In the table which follows, deaths from selected categories of external cause (accidents, poisonings and violence) are shown for recent years.

Motor vehicle traffic accidents account for considerably fewer deaths than those caused by either heart disease, cerebrovascular disease or malignant neoplasms although it is comparable with these other major causes when considered in terms of 'life years lost'. In 1983 there were 217 deaths from all causes of persons in the 15-24 years age group and of these 47.9 per cent were caused by motor vehicle accidents.

Deaths: External Causes (Accidents, Poisonings and Violence),  
South Australia

Year	Cause						
	Motor Vehicle Traffic Accidents	Accidental Drownings	Accidental Poisonings	Accidental Falls	Suicide and (Intentional) Self-inflicted Injury	Homicide and Injury Purposely Inflicted	Other External Causes
							Total Deaths for Category
					MALES		
1979 .....	229	28	4	33	132	16	72
1980 .....	212	18	8	30	99	14	83
1981 .....	175	22	7	32	118	11	64
1982 .....	189	27	3	30	131	18	76
1983 .....	208	17	14	37	104	7	91
					FEMALES		
1979 .....	73	5	1	51	47	11	21
1980 .....	68	6	4	34	46	14	34
1981 .....	54	4	1	42	43	4	21
1982 .....	80	9	1	48	45	12	33
1983 .....	59	6	2	40	35	10	34

The following table shows deaths from external causes by age groups in South Australia for 1983.

**Deaths: External Causes (Accidents, Poisonings and Violence), Age Groups  
South Australia, 1983**

Age Group	Cause							Total Deaths for Category
	Motor Vehicle Traffic Accidents	Accidental Drownings	Accidental Poisonings	Accidental Falls	Suicide and (Intentional) Self-inflicted Injury	Homicide and Injury Purposely Inflicted	Other External Causes	
MALES								
Under 15 years	9	6	—	—	—	—	8	23
15-24 years .....	87	3	6	2	19	1	18	136
25-34 years .....	38	3	7	2	29	1	16	96
35-44 years .....	19	1	1	4	12	2	11	50
45-54 years .....	17	1	—	1	13	—	14	46
55-64 years .....	21	—	—	4	12	2	13	52
65-74 years .....	8	2	—	8	15	—	6	39
75 years and over .....	9	1	—	16	4	1	5	36
Total .....	208	17	14	37	104	7	91	478
FEMALES								
Under 15 years	9	4	—	—	—	2	9	24
15-24 years .....	17	—	1	—	5	2	1	26
25-34 years .....	11	—	1	1	7	3	4	27
35-44 years .....	5	2	—	1	4	—	6	18
45-54 years .....	5	—	—	1	5	2	2	15
55-64 years .....	4	—	—	—	10	1	2	17
65-74 years .....	6	—	—	4	1	—	6	17
75 years and over .....	2	—	—	33	3	—	4	42
Total .....	59	6	2	40	35	10	34	186

**INFANT MORTALITY**

The infant mortality rate, *i.e.* the number of deaths of children under one year to every 1 000 live births, has shown a marked decline from 148.77 in 1875-79 to 11.67 in 1975-79. In 1983 the rate was 9.23. The number of infant deaths and infant death rates for selected years since 1851 are shown in the Statistical Summary, Appendix A.

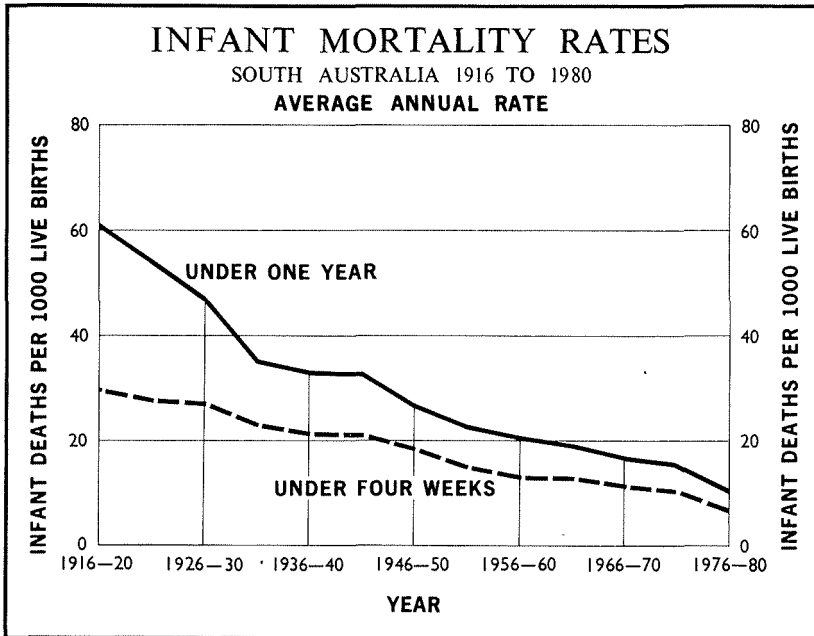
**Infant Mortality: Age at Death, South Australia**

Year	Under 1 Day	1 Day and Under 1 Week	1 Week and Under 4 Weeks	4 Weeks and Under 3 Months	3 Months and Under 6 Months	6 Months and Under 12 Months	Total under 12 Months	
							Number	Rate (a)
<b>MALES</b>								
1980 .....	33	28	11	16	14	4	106	11.20
1981 .....	23	23	12	11	16	12	97	9.88
1982 .....	43	29	16	17	22	8	135	13.56
1983 .....	42	19	15	14	12	7	109	10.67
<b>FEMALES</b>								
1980 .....	35	6	8	12	12	8	81	8.96
1981 .....	16	9	10	11	8	6	60	6.29
1982 .....	25	16	10	14	8	13	86	9.21
1983 .....	26	10	6	13	13	6	74	7.69
<b>PERSONS</b>								
1980 .....	68	34	19	28	26	12	187	10.11
1981 .....	39	32	22	22	24	18	157	8.11
1982 .....	68	45	26	31	30	21	221	11.45
1983 .....	68	29	21	27	25	13	183	9.23

(a) Rate per 1 000 live births.

The fall in infant mortality is attributable to many factors, including better pre-natal care and obstetric management, which have led to safer births, and to the neonatal intensive care units at major maternity hospitals which have brought about a high survival rate for small and immature infants.

Statistics of infant mortality shown in the table above are inclusive of the neonatal segment of perinatal deaths which are discussed in the following paragraphs.



### PERINATAL DEATHS

Perinatal deaths comprise fetal deaths (stillbirths) and neonatal deaths (deaths within twenty-eight days of birth), of children weighing at least 500 grams at delivery or, when birthweight is unavailable, of at least twenty-two weeks gestation.

In the following table, the statistics for 1983 and earlier years relate to this revised definition.

## Live Births, Fetal Deaths, Neonatal Deaths and Perinatal Deaths, South Australia

Year	Live Births Number	Perinatal Deaths					
		Fetal		Neonatal		Total Perinatal	
		Number	Rate (a)	Number	Rate (b)	Number	Rate (c)
MALES							
1979 .....	9 513	73	7.62	44	4.63	117	12.21
1980 .....	9 458	59	6.20	68	7.19	127	13.34
1981 .....	9 811	60	6.08	49	4.99	109	11.04
1982 .....	9 955	69	6.88	85	8.54	154	15.36
1983 .....	10 211	65	6.33	71	6.95	136	13.23
FEMALES							
1979 .....	8 955	62	6.88	46	5.14	108	11.98
1980 .....	9 028	61	6.71	40	4.43	101	11.11
1981 .....	9 531	69	7.19	31	3.25	100	10.42
1982 .....	9 333	56	5.96	48	5.14	104	11.08
1983 .....	9 619	51	5.27	39	4.05	90	9.31
PERSONS							
1979 .....	18 468	135	7.26	90	4.87	225	12.09
1980 .....	18 486	120	6.45	108	5.84	228	12.25
1981 .....	19 342	129	6.63	80	4.14	209	10.73
1982 .....	19 288	125	6.44	133	6.90	258	13.29
1983 .....	19 830	116	5.82	110	5.55	226	11.33

(a) Fetal death rate is the number of fetal deaths per 1 000 of the total of live births and fetal deaths.

(b) Neonatal death rate is the number of neonatal deaths per 1 000 live births.

(c) Perinatal death rate is the number of perinatal deaths per 1 000 of the total of live births and fetal deaths.

In South Australia a certificate must be completed by medical practitioners for the neonatal death of any child born alive, irrespective of birthweight, and for any fetal death where the period of gestation was at least twenty weeks or the birthweight was at least 400 grams. This definition was used as the basis for publication of perinatal statistics until 1980. However in accordance with a recommendation of the Ninth Revision Conference (1975) of the World Health Organization (WHO) 'that national perinatal statistics should include all fetuses and infants weighing at least 500 grams or, when birthweight is unavailable, the corresponding gestational age (twenty-two weeks) or body length (twenty-five centimetres crown-heel), whether alive or dead' the definition of perinatal deaths has been amended.

Despite the improvements which have already been achieved infant and perinatal mortality still presents one of the most challenging areas for medical and scientific research. For example, Rh incompatibility as a cause of death is now prevented largely as a direct result of prophylactic immunisation. In Adelaide, research on placental efficiency and fetal anoxia has enabled pre-natal detection of impending danger, so that treatment can prevent damage or death of the fetus. Falling death rates attributable to placental disorders and anoxia are evidence of this.

With the introduction of the Ninth Revision of ICD in 1979 provision exists for the classification of perinatal deaths according to the main disease or condition in both the child and the mother as illustrated in the table below.

## Perinatal Deaths: Causes of Death, South Australia

Cause of Death	1981	1982	1983
Main disease or condition in child:			
Slow fetal growth, fetal malnutrition and immaturity (764-5) .....	7	29	21
Birth trauma (767) .....	6	5	1
Hypoxia, birth asphyxia and other respiratory conditions (768-770) .....	75	65	69
Fetal and neonatal haemorrhage (772) .....	7	12	8
Haemolytic disease of fetus or newborn (773) .....	—	2	1
Other conditions originating in the perinatal period (Rem. 764-779) .....	64	60	68
Congenital anomalies (740-759) .....	42	76	50

## Perinatal Deaths: Causes of Death, South Australia (continued)

Cause of Death	1981	1982	1983
Main disease or condition in child (continued):			
Infectious and parasitic diseases (001-139) .....	—	—	—
All other causes (140-739, 780-799, E800-E999) .....	8	9	8
Total .....	209	258	226
Maternal condition:			
Maternal conditions which may be unrelated to present pregnancy (760) .....	15	11	19
Fetus or newborn affected by maternal complications of pregnancy (761) .....	23	38	32
Fetus or newborn affected by complications of placental cord and membranes (762) .....	58	67	63
Fetus or newborn affected by other complications of labour and delivery (763) .....	7	2	5
No maternal condition reported .....	106	140	107
Total .....	209	258	226

## LIFE EXPECTANCY

Life tables are measures of life expectancy compiled from the death rates prevailing over a period. They form the basis for the *stationary population* which is the population that would result from a constant number of births each year which had been subject at each age to the life table mortality rates.

Since 1921, official life tables have been calculated from the separate male and female populations as enumerated at the census, and the deaths of the three years around the census. Earlier life tables were compiled for the decennial periods 1881-90, 1891-1900 and 1901-10. Life tables for Australia and each of the States and Territories have been prepared in recent years using annual age estimates and the deaths of a particular year.

A key value in life tables is the expectation of life remaining at each age.

The following tables show respectively the expectation of life at specified ages in Australia based on mortality experience for the three years spanning each of the Censuses of 1921, 1933, 1947, 1954, 1961, 1966, 1971 and 1976 and similar details for South Australia for the year 1979-1983.

## Life Expectancy, Australia

Age	1920-22	1932-34	1946-48	1953-55	1960-62	1965-67	1970-72	1975-77
MALES								
0 .....	59.2	63.5	66.1	67.1	67.9	67.6	67.8	69.6
5 .....	60.4	62.6	63.8	64.3	64.8	64.4	64.5	65.8
10 .....	56.0	58.0	59.0	59.5	59.9	59.5	59.7	60.9
20 .....	47.0	48.8	49.6	50.1	50.4	50.0	50.2	51.5
30 .....	38.4	39.9	40.4	40.9	41.1	40.7	40.9	42.2
40 .....	30.1	31.1	31.2	31.7	31.8	31.4	31.6	32.8
50 .....	22.2	22.8	22.7	22.9	23.1	22.8	22.9	24.0
60 .....	15.1	15.6	15.4	15.5	15.6	15.3	15.4	16.4
70 .....	9.3	9.6	9.6	9.6	9.8	9.5	9.5	10.3
80 .....	5.0	5.2	5.4	5.5	5.6	5.5	5.5	5.9
FEMALES								
0 .....	63.3	67.1	70.6	72.8	74.2	74.2	74.5	76.6
5 .....	63.6	65.6	67.9	69.6	70.8	70.6	71.0	72.7
10 .....	59.2	61.0	63.1	64.8	65.9	65.8	66.1	67.7
20 .....	50.0	51.7	53.5	55.1	56.2	56.0	56.4	58.0
30 .....	41.5	42.8	44.1	45.4	46.5	46.3	46.7	48.3
40 .....	33.1	34.0	34.9	36.0	37.0	36.9	37.2	38.7
50 .....	24.9	25.6	26.1	27.0	27.9	27.8	28.1	29.5

## Life Expectancy, Australia (continued)

Age	1920-22	1932-34	1946-48	1953-55	1960-62	1965-67	1970-72	1975-77
FEMALES (continued)								
60 .....	17.2	17.7	18.1	18.8	19.5	19.5	19.7	21.0
70 .....	10.4	11.0	11.1	11.6	12.2	12.2	12.4	13.5
80 .....	5.6	6.0	6.0	6.3	6.7	6.7	6.9	7.6

## Life Expectancy, South Australia

At Age	1979	1980	1981	1982	1983
MALES					
0 .....	71.4	71.0	72.2	71.6	72.4
5 .....	67.2	67.0	68.0	67.7	68.4
10 .....	62.3	62.1	63.1	62.9	63.5
20 .....	52.7	52.6	53.5	53.3	53.9
30 .....	43.5	43.3	44.1	43.9	44.6
40 .....	34.1	33.9	34.7	34.4	35.1
50 .....	25.1	25.0	25.7	25.3	26.0
60 .....	17.1	17.1	17.7	17.3	17.9
70 .....	10.8	10.8	11.1	11.0	11.2
80 .....	6.5	6.4	6.4	6.4	6.4
FEMALES					
0 .....	77.8	78.1	79.5	79.0	79.4
5 .....	73.7	74.0	75.1	74.9	75.3
10 .....	68.8	69.1	70.1	69.9	70.3
20 .....	59.0	59.3	60.3	60.1	60.5
30 .....	49.3	49.5	50.5	50.3	50.8
40 .....	39.7	39.9	40.7	40.6	41.1
50 .....	30.4	30.6	31.4	31.2	31.7
60 .....	21.8	21.9	22.5	22.3	22.9
70 .....	14.1	14.2	14.5	14.3	14.8
80 .....	7.8	8.0	8.2	8.0	8.4

Expectation of life, particularly at birth, improved at every age in the first half of this century. There was little improvement between 1953-55 and 1970-72 but life expectancy has increased markedly since then. The expectation at birth based on Australian death figures for 1983 was 72.1 years for males and 78.7 years for females.

## Further References

Additional information may be found in the following publications:

- 3301.0 *Births—Australia*
- 3301.4 *Births—South Australia*
- 3302.0 *Deaths—Australia*
- 3302.4 *Deaths—South Australia*
- 3303.0 *Causes of Death—Australia*
- 3304.0 *Perinatal Deaths—Australia*

## 5.6 MARRIAGES AND DIVORCES

### MARRIAGES

The amended legislation relating to marriages is the *Commonwealth Marriage Act 1961* which came into full operation on 1 September 1963. The Principal Registrar of Births, Deaths and Marriages in South Australia carries out the statutory duties under the Act and has supervision over ministers of religion (as regards their duties under the Marriage Act), the District Registrars and other persons authorised to perform marriages.

Marriage numbers and rates for selected years from 1846 are shown in the Statistical Summary, Appendix A. Particulars relating to first marriages, remarriages and crude marriage rates for the last five years are shown in the following table. The crude marriage rate rose throughout the sixties from 6.99 in 1960 to 9.38 in 1970, gradually declined to a level of 8.67 in 1974 and fell substantially to 7.78 in 1975. The 1976 rate of 8.55 coincided with the introduction of the Family Law Act and a significant increase in the number of divorced persons remarrying. Rates for 1977 (7.87), 1978 (7.56) and 1979 (7.51) indicated a continuation of the decline apparent from the beginning of the decade. However, the proportion of divorced persons remarrying to total persons marrying gradually increased over the same period. In 1982 a record 4 801 divorced persons remarried (22.0 per cent of all persons marrying).

Previous Marital Status of Persons Marrying, South Australia

Year	Bridegrooms			Brides			Total Marriages	Rate (a)
	Bachelor	Widower	Divorced	Spinster	Widow	Divorced		
1979 .....	7 403	292	2 083	7 545	370	1 863	9 778	7.51
1980 .....	7 678	298	2 088	7 725	352	1 987	10 064	7.69
1981 .....	7 757	331	2 164	7 769	372	2 111	10 252	7.78
1982 .....	8 137	290	2 508	8 280	362	2 293	10 935	8.23
1983 .....	7 910	292	2 348	8 006	374	2 170	10 550	7.87

(a) Per 1 000 of mean estimated resident population.

Between 1970 and 1979 the numbers of brides and bridegrooms marrying for the first time declined, although from 1980 there has been a reversal of this trend. From 1973 to 1981 the number of marriages between bachelors and spinsters declined from 9 045 to 6 882 (from 85.3 to 67.1 per cent of all marriages). The number of divorced persons remarrying rose significantly.

Age at Marriage and Previous Marital Status, South Australia, 1983

Age	Bridegrooms				Brides			
	Bachelor	Widower	Divorced	Total	Spinster	Widow	Divorced	Total
Under 20 years .....	233	—	—	233	1 380	—	1	1 381
20-24 years .....	4 240	2	33	4 275	4 718	1	170	4 889
25-29 years .....	2 423	2	405	2 830	1 396	20	546	1 962
30-34 years .....	677	10	588	1 275	346	29	526	901
35-39 years .....	176	11	510	697	91	35	400	526
40-44 years .....	63	18	318	399	39	32	220	291
45 years and over .....	98	249	494	841	36	257	307	600
All ages .....	7 910	292	2 348	10 550	8 006	374	2 170	10 550

The following table shows the decline in the proportion of marriages between bachelors and spinsters, and the increase in marriages where at least one partner was divorced, for the years 1978 to 1983.

**Previous Marital Status: Selected Marriages,  
South Australia**

Year	First Marriages: Neither Party Previously Married		Remarriages: At Least One Party Divorced	
	No.	Per cent	No.	Per cent
1978 .....	6 745	68.9	2 803	28.6
1979 .....	6 660	68.1	2 862	29.3
1980 .....	6 844	68.0	2 970	29.5
1981 .....	6 882	67.1	3 092	30.2
1982 .....	7 233	66.1	3 458	31.6
1983 .....	7 025	66.6	3 260	30.9

During 1983 the median age (that age at which one half of the total number of persons are below the age and the other half exceed it) of persons marrying for the first time was 24.5 years for bachelors and 22.4 years for spinsters, a difference of 2.1 years. The following table shows median ages for the last six years of all persons marrying, classified by previous marital status at the time of marriage.

**Median Age at Marriage and Previous Marital Status, South Australia <sup>(a)</sup>**

Year	Median Age of Bridegrooms (Years)				Median Age of Brides (Years)			
	Bachelor	Widower	Divorced	Total	Spinster	Widow	Divorced	Total
1978 ....	23.5	61.3	35.0	24.9	21.2	53.6	32.0	22.2
1979 ....	23.6	61.1	35.5	25.0	21.4	54.0	32.5	22.4
1980 ....	23.8	58.9	35.4	25.1	21.6	52.8	32.5	22.7
1981 ....	24.1	60.6	35.7	25.5	21.8	54.2	32.7	23.0
1982 ....	24.2	60.0	35.5	25.8	22.0	51.7	32.7	23.3
1983 ....	24.5	61.2	36.3	26.0	22.4	52.9	33.3	23.7

(a) The term 'median age' refers to that age which divides total age distribution into two parts of equal magnitude.

### MARRIAGE RITES

The proportion of marriages performed by civil officers in South Australia during the decade from 1960 to 1969 accounted for 10.9 per cent of all marriages and increased to a record level of 39.0 per cent in 1982.

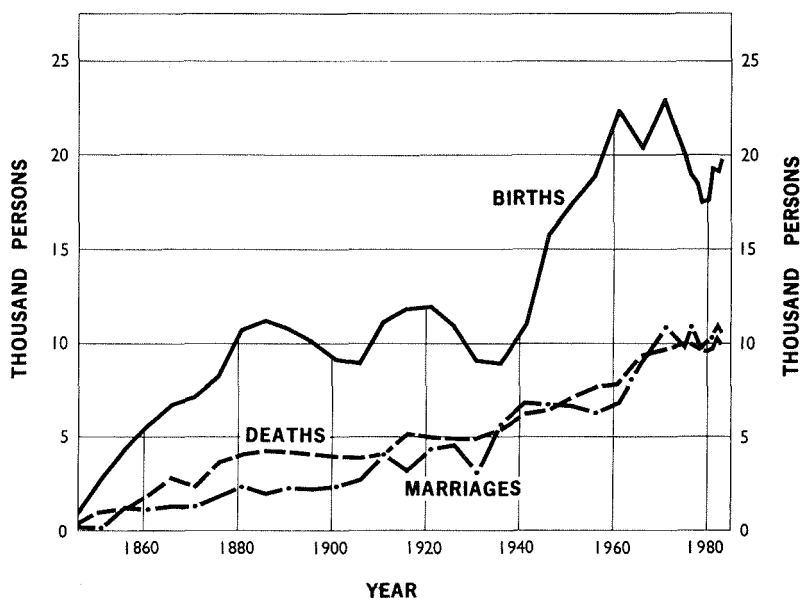


## Marriages: Marriage Rites, South Australia

Rites	Number of Authorised Celebrants at January 1983	Number of Marriages			Proportion of Total Marriages		
		1981	1982	1983	1981	1982	1983
<b>Denomination:</b>						<b>Per cent</b>	
Anglican .....	213	1 131	1 091	1 048	11.0	10.0	9.9
Baptist .....	96	244	264	227	2.4	2.4	2.2
Catholic .....	245	1 664	1 684	1 383	16.2	15.4	13.1
Churches of Christ .....	82	208	202	206	2.0	1.8	2.0
Lutheran .....	158	503	551	435	4.9	5.0	4.1
Orthodox .....	24	204	239	220	2.0	2.2	2.1
Presbyterian .....	6	40	49	50	0.4	0.4	0.5
Salvation Army .....	53	81	81	72	0.8	0.7	0.7
Uniting Church .....	311	2 094	2 069	2 056	20.4	18.9	19.5
Other denominations .....	264	381	439	839	3.8	4.0	8.0
<b>Total .....</b>		<b>1 452</b>	<b>6 550</b>	<b>6 669</b>	<b>63.9</b>	<b>61.0</b>	<b>62.0</b>
<b>Civil Ceremonies by:</b>							
State Officers .....	37	2 251	2 344	2 057	22.0	21.4	19.5
Other civil celebrants .....	35	1 451	1 922	1 957	14.2	17.6	18.5
<b>Total .....</b>		<b>1 524</b>	<b>10 252</b>	<b>10 935</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

## BIRTHS, DEATHS AND MARRIAGES

SOUTH AUSTRALIA 1846 TO 1983



## MARRIAGE OF MINORS

The *Marriage Act 1961* stipulates the marriageable age to be eighteen years or over for a male and sixteen years or over for a female. Under exceptional circumstances a judge or magistrate can, upon application by a party who has not attained marriageable age but who is at least sixteen in the case of a male or fourteen in the case of a female, authorise him or her to marry a particular person who is of marriageable age.

Before 1 July 1973 prior consent had to be obtained from either both parents, one parent, a guardian or guardians, or other prescribed authority, according to the circumstances, where a party to a marriage was under twenty-one years. From 1 July 1973 the age of majority for purposes of the *Marriage Act* was reduced to eighteen years.

Figures relating to the marriages of persons under twenty-one years of age for the five years to 1983 are shown in the following table.

Marriages of Persons Under 21 Years of Age, South Australia

Year	Age in Years							Total Under 21	Percentage of Total Marriages
	Under 15	15	16	17	18	19	20		
BRIDEGRROOMS									
1979 .....	—	—	—	12	123	311	664	1 110	11.4
1980 .....	—	—	—	6	108	280	612	1 006	10.0
1981 .....	—	—	—	3	102	215	608	928	9.1
1982 .....	—	—	1	4	86	245	518	854	7.8
1983 .....	—	—	—	3	59	171	459	692	6.6
BRIDES									
1979 .....	—	4	81	212	688	1 130	1 273	3 388	34.6
1980 .....	—	3	49	191	616	1 041	1 287	3 187	31.7
1981 .....	—	3	47	177	585	1 003	1 207	3 022	29.5
1982 .....	—	4	50	155	503	969	1 272	2 953	27.0
1983 .....	—	3	31	122	420	805	1 110	2 491	23.6

## DIVORCES

The South Australian Registry of the Family Court of Australia has had exclusive jurisdiction over divorces since 31 May 1976, under the *Family Law Act 1975*. This Act repealed the *Matrimonial Causes Act 1959* which had granted jurisdiction to hear and determine divorces to the Supreme Courts of the States and Territories.

## Family Court (SA Registry)

Matrimonial causes within the jurisdiction of the Court include dissolution of marriage, maintenance, custody, property settlement, enforcement and injunction proceedings. The hearing of applications for dissolution began on 1 March 1976 although hearings of the other matrimonial causes were held before that date.

Under the provisions of the *Family Law Act 1975* the sole ground for dissolution of marriage is irretrievable breakdown, established by twelve months separation. Prospective applicants are encouraged to seek help from marriage counsellors attached to the Family Court or from voluntary marriage guidance organisations.

Maintenance entitlement is determined largely by the needs of the applicant and the capacity of the respondent to pay. Any transfer or settlement of property is also taken into consideration.

In custody proceedings the welfare of children is regarded as paramount. The Court can order that children be separately represented in matters affecting their custody or

maintenance. Both parties are considered liable for their maintenance according to their respective financial resources. If the proceedings are contested, both parties may be referred to a welfare officer, and the Court may then require a report on the circumstances of affected children.

In settling disputes over matrimonial property the Court takes into account any maintenance order and the effective contribution of each party to that property.

### Decrees Granted

The following table shows the number of decrees granted for the years 1978 to 1983.

#### Divorces: Decrees Granted, South Australia

Decree	1983							Total
	1978	1979	1980	1981	1982	To Husband	To Wife	
Dissolution of marriage .....	3 805	3 794	4 203	4 132	4 526	1 808	2 623	4 431
Nullity of marriage (a) .....	1	3	..	..	..	..	..	..
Total .....	3 806	3 797	4 203	4 132	4 526	1 808	2 623	4 431

(a) Not collected from 1980.

In 1983 there were 4 431 decrees granted for divorce, a decrease of 2.1 per cent on the 4 526 decrees granted in 1982.

Details of the relative ages at marriage of husbands and wives for decrees granted in 1983 are contained in the following table.

#### Divorces: Ages of Parties at Time of Marriage, South Australia, 1983

Age of Husband (Years)	Age of Wife (Years)								Total Husbands
	Under 20	20-24	25-29	30-34	35-39	40-44	45 and Over	Not Stated	
Under 20 .....	314	89	4	1	—	—	—	—	408
20-24 .....	1 100	1 205	92	17	1	2	1	5	2 423
25-29 .....	180	474	187	38	12	3	—	—	894
30-34 .....	31	115	96	41	16	5	3	—	307
35-39 .....	6	21	40	41	24	11	6	1	150
40-44 .....	—	9	19	20	20	13	9	1	91
45 and over .....	1	4	4	16	11	31	74	4	145
Not stated .....	4	3	2	1	—	—	1	2	13
Total wives ..	1 636	1 920	444	175	84	65	94	13	4 431

The following table shows the duration of marriage, *i.e.* the interval between marriage and the date the decree was made absolute, for decrees granted during the five years to 1983. For each of these years the duration of marriage was between 5 and 9 years in just under 30 per cent of divorces.

#### Divorces: Duration of Marriage, South Australia

Year	Duration of Marriage (Years)							Total
	0-4	5-9	10-14	15-19	20-24	25-29	30 and Over	
1979 .....	791	1 081	700	446	322	223	231	3 794
1980 .....	863	1 212	763	503	392	235	235	4 203
1981 .....	861	1 235	820	454	336	228	198	4 132
1982 .....	865	1 316	916	592	378	232	227	4 526
1983 .....	905	1 249	945	550	323	229	230	4 431

For decrees granted in 1983 the following two tables show the relative ages of husbands and wives at the time the decree was granted, and the duration of marriage and number of children of the marriage. From these tables it can be seen that 42 per cent of husbands and 45 per cent of wives were aged between 25 and 34 at the time of dissolution, and that there were children of the marriage in 61 per cent of divorces.

**Divorces: Ages of Parties at Time of Dissolution, South Australia, 1983**

Age of Husband (Years)	Age of Wife (Years)							Not Stated	Total Husbands
	Under 25	25-29	30-34	35-39	40-44	45-49	50 and Over		
Under 25 .....	188	20	5	—	—	—	—	—	213
25-29 .....	305	443	57	13	2	1	—	—	821
30-34 .....	57	438	476	45	9	2	—	—	1 027
35-39 .....	10	101	337	338	35	9	5	1	836
40-44 .....	—	15	71	236	192	31	8	1	554
45-49 .....	—	4	12	63	116	107	26	2	330
50 and over .....	—	4	12	26	53	129	407	7	638
Not stated .....	3	1	2	1	1	1	2	1	12
Total wives ..	563	1 026	972	722	408	280	448	12	4 431

**Divorces: Duration of Marriage and Children of the Marriage, South Australia, 1983 <sup>(a)</sup>**

Duration of Marriage (Years)	Decrees Granted to Marriages with							Total Decrees Granted	Total Children
	No Children	1 Child	2 Children	3 Children	4 Children	5 Children	6 or more Children		
Under 5 .....	571	223	82	20	5	2	2	905	490
5-9 .....	491	324	341	74	14	4	—	1 248	1 304
10-14 .....	141	169	454	146	29	5	2	946	1 671
15-19 .....	51	82	263	111	34	6	3	550	1 125
20-24 .....	107	113	79	20	2	1	1	323	351
25-29 .....	147	56	19	7	—	—	—	229	115
30 and over .....	212	12	5	—	—	1	—	230	27
Total dissolutions ....	1 720	979	1 243	378	84	19	8	4 431	..
Total children .....	..	979	2 486	1 134	336	95	53	..	5 083

(a) Number of children living and under 18 years at time of application.

**Further References**

Additional information may be found in the following publications:

- 3304.4 *Marriages—South Australia*
- 3305.4 *Divorces—South Australia*
- 3306.0 *Marriages—Australia*
- 3307.0 *Divorces—Australia*

## **PART 6**

# **SOCIAL ENVIRONMENT**

## **6.1 LAW, ORDER AND PUBLIC SAFETY**

### **LAW AND ADMINISTRATION**

The law in force in South Australia consists of:

- (i) so much of the common law of England and such English statute law as came into force on the original settlement of the colony in 1836;
- (ii) Acts passed by the Parliament of the State of South Australia, together with regulations, rules, orders, etc., made thereunder;
- (iii) Acts passed by the Commonwealth Parliament within the scope of its allotted powers, together with regulations, rules, orders, etc., made thereunder;
- (iv) Imperial law binding South Australia as part of the British Commonwealth, as part of Australia or as a State—subject, since 1931, to the Statute of Westminster (this relates mainly to external affairs or matters of Imperial concern);
- (v) Case law (this consists of judicial decisions of the English, Commonwealth or State Courts, respectively, and represents an important part of the law in force in South Australia).

The scope of Commonwealth legislation is limited to the subjects specified in the Commonwealth Constitution. In some cases Commonwealth government powers of legislation are exclusive of, in others concurrent with, those of the State. In all cases of conflict, valid Commonwealth laws override State laws.

## ATTORNEY-GENERAL'S DEPARTMENT

The Attorney-General's Department is responsible to the Attorney-General for the provision of legal and associated services to him, Cabinet, Government departments and specified statutory authorities.

The Attorney-General who is a member of State Parliament and a Minister of the Crown is the first law officer of the Crown. He initiates and defends certain proceedings by and against the State as *parens patriae*, and is responsible for the laying of informations in cases of indictable offences. The Attorney-General also administers Acts of Parliament relating to justices, coroners, land titles, registration of companies and business names, and the Electoral Department.

The Solicitor-General at the request of the Attorney-General acts as counsel for the Crown. The Crown Solicitor is Permanent Head of the Attorney-General's Department and is responsible for the provision of legal services to the Crown, except for services provided by the Solicitor-General.

The Department is comprised of the Attorney-General's Office, Crown Solicitor's Office, Parliamentary Counsel's Office, Office of Crime Statistics, Parliamentary Reporting Division, Administrative Services Division and ancillary legal research services.

## COURTS DEPARTMENT

The Courts Department is responsible for the performance of all of the non-judicial functions of the courts serviced by the Department. The Department is comprised of the Supreme Court Division, Subordinate Jurisdiction Division, Magistrates Division, Sheriff's Office, Court Reporting Division and Support Services Division. Administrative services are provided for the Supreme Court, the District Court, Courts of Summary Jurisdiction and various boards and tribunals.

## SUPREME COURT

The Supreme Court is the superior court of record in and for the State and is constituted by the Chief Justice, and puisne judges and the masters appointed under the Supreme Court Act, 1935-1983. The Supreme Court is a court of law and equity and is vested with jurisdiction in civil, criminal, testamentary, land and valuation, admiralty and appellate causes or matters. The Supreme Court Rules made by the Judges under the power contained in the Act regulate the pleading practice and procedure of the Court in any jurisdiction and the manner in which all suitors' funds are to be dealt with. There are at present fourteen judges of the Supreme Court, comprising the Chief Justice, Mr. Justice King, and fourteen puisne judges and three masters. Judges and Masters hold office until the age of seventy years at a salary determined by the Governor. The Court sits in Adelaide, but holds circuit sessions three times a year at Port Augusta and Mount Gambier.

The Supreme Court has unlimited civil and criminal jurisdiction, except in respect of matters which are reserved for the original jurisdiction of Commonwealth Courts. The Court determines its own practice. Following the establishment of District Criminal Courts, jurisdiction to hear many indictable offences was vested in these Courts late in 1970.

Crimes and misdemeanours prosecuted by indictment in the Supreme Court must be tried before a jury. The Court has original jurisdiction over all litigious matters arising in the State except where its jurisdiction is excluded by statute. The original jurisdiction of the Court is usually exercised by a single judge sitting in Court or in Chambers.

The Court has power to restrain lower courts from acting in excess of their jurisdiction and may, by order, compel them to enforce a legal right. The Court acts as a court of appeal from lower courts. In proper cases, appeals lie from decisions of the Supreme Court to the High Court of Australia or where not excluded by statute, direct to Her Majesty In Council (*i.e.* the Privy Council).

The Supreme Court in its testamentary causes jurisdiction is the only authority competent to grant probate of the will, or administration of the estate, of any deceased person who leaves real or personal property in the State. Except in the case of certain small estates, a grant of representation is generally necessary to obtain title to the property of a deceased person. The Succession Duty Act was amended during 1979 and exempted completely from payment of succession duty, the estates of persons who died on or after 1 January 1980. The powers of the Court are exercised by the Judges, the Masters and the Registrar or Deputy Registrar of Probates. The latter deal with all applications for probate and administration where there is no contention and any matters prescribed by the rules. In cases of doubt or difficulty, the registrar may obtain the direction of a judge. The records of the Court are available for public inspection, and copies of wills and other documents may be obtained.

### DISTRICT COURTS

The first District Court sat in South Australia on 31 August 1970. The District Court is an intermediate Court and is constituted by a Senior Judge and eighteen judges appointed under the Local and District Criminal Courts Act. Two of the judges sit in the Children's Court and a further four judges sit in the Appeal Tribunals Jurisdiction.

A judge of the District Court holds office until the age of seventy years at a salary determined by the Governor. The District Court in its civil and criminal jurisdictions sits in Adelaide. It also holds civil circuits at Port Lincoln, Port Pirie, the Riverland, Mount Gambier and Whyalla and criminal circuits at Mount Gambier and Port Augusta.

On 1 July 1980, the Office of Crime Statistics within the Attorney-General's Department, implemented a system of data collection from the Supreme and District Courts of South Australia. The following table shows details of persons charged and convicted for major offences charged in these Courts for the year ended 31 December 1982.

**Supreme and District Courts: Major Offences Charged, South Australia, 1982**

Major Offence Charged	Persons (a)		
	Charged	Convicted	Sentenced to Prison
Homicide .....	62	26	17
Assault .....	166	116	46
Rape .....	55	26	25
Other sexual offences .....	80	57	18
Robbery .....	71	62	54
Other offences against the person ...	11	8	2
Forgery and fraud .....	114	92	28
Breaking and entering .....	321	286	68
Arson .....	23	17	7
Drug offences .....	259	248	112
Other offences .....	159	139	34
Total offences .....	1 321	1 077	411

(a) Includes corporate bodies.

The civil jurisdictional limit of the District Court is \$60 000 in actions relating to injury, damage or loss caused by, or arising out of the use of a motor vehicle and in any other case \$40 000. The criminal jurisdictional limit of the District Court is fifteen years imprisonment. Crimes prosecuted by indictment in the District Court must be tried before a jury. Although it is possible to have certain civil issues tried before a jury, this has never been done, and civil matters are heard by a Judge sitting alone.

Appeals from decisions of the District Court in civil matters are to the Full Court of the Supreme Court of South Australia and in the criminal jurisdiction are to the Court of Criminal Appeal of the Supreme Court of South Australia.

### Local Courts

Local Courts were first established in South Australia by an ordinance of 1850 and originally had criminal as well as civil jurisdiction. The Local Courts Act, 1926 effected important alterations in the structure and jurisdiction of Local Courts by abolishing juries in Local Courts and also juries as constituent members of Courts and Full Jurisdiction (except on the application of a party), by conferring equitable jurisdiction on the Local Court of Adelaide of Full Jurisdiction, and by giving a full appeal to the Supreme Court on facts as well as on law from all judgments, determinations and orders of local courts in actions involving more than \$60. This Act was repealed in 1961 when the Local and District Criminal Court Act was passed.

Local Courts are divided into four areas; Full Jurisdiction (or District Court), Limited Jurisdiction, Special Jurisdiction and Small Claims. The courts vested with all jurisdictions are the Local Courts of Adelaide, South East (Mount Gambier), Lincoln (Port Lincoln), Pirie (Port Pirie), Riverland (Berri) and Whyalla. These courts may hear and determine actions for amounts up to \$40 000 and in relation to a course of action in tort relating to injury, damage or loss caused by or arising out of, in the case of a motor vehicle, up to \$60 000. The equitable jurisdiction provisions have also been extended to all Local Courts of Full Jurisdiction. Local Courts of Limited Jurisdiction may hear and determine claims of up to \$7 500, with special provisions for hearing 'small claims' as defined for a pecuniary sum not exceeding \$1 000. Courts of Special Jurisdiction may hear and determine any unsatisfied judgment summons whatever the amount of the judgment.

**Local Courts: Summary of Transactions, South Australia**

Year	Total Claims	Verdicts and Judgments		Service and Execution of Process Act
	Summonses Issued (a)	Verdicts by Trial	Judgments by Default	Summonses for Service out of Jurisdiction
1978 .....	77 963	5 132	29 147	2 676
1979 .....	80 944	3 056	30 911	3 312
1980 .....	76 612	3 321	32 025	3 010
1981 .....	67 222	3 178	28 742	2 710
1982 .....	68 129	2 282	29 696	3 022
1983 .....	64 983	3 560	26 382	2 672

(a) Including those withdrawn or settled out of Court.



A Local Court of Full Jurisdiction or District Court is constituted by a District Court Judge and exercises all jurisdictions under the Act. A magistrate may exercise limited jurisdiction including small claims, and special jurisdiction; two justices of the peace sitting together or one special justice sitting alone may only exercise special jurisdiction.

Any Local Court may reserve any question of law arising in an action for the decision of the Supreme Court, and any party who is dissatisfied with a final judgment, determination or order of a Local Court, if the claim exceeds \$1 000, may appeal to the Supreme Court. Appeals involving claims under \$1 000 may be made if leave of the District Court is obtained. Pursuant to Section 28 of the Act, the Governor may appoint the Senior Judge or any other judge to make rules of court for carrying into effect the Act or any other Act conferring jurisdiction upon Local Courts.

### COURTS OF SUMMARY JURISDICTION

Courts of Summary Jurisdiction are held in all major towns to hear criminal cases. In offences of dishonesty their jurisdiction is confined to cases where the property value is not more than \$2 000, and the limit of their jurisdiction as to penalty is imprisonment for two years. Their procedure is regulated by the Justices Act, 1921-1984. They are presided over, either by a special magistrate, a special justice or by two justices of the peace with the more serious cases generally being heard by a special magistrate.

**Courts of Summary Jurisdiction, Selected Offences, South Australia, 1982-83 <sup>(a)</sup>**

Offence	Persons Charged	Persons Convicted
Minor assault .....	1 285	750
Assault police .....	456	313
Possess marijuana .....	1 453	1 214
False pretences .....	494	346
Forge and utter .....	69	47
Unlawful use of motor vehicle .....	364	293
Shop theft .....	3 057	1 710
Drive under the influence of alcohol .....	893	851
Exceeding prescribed content of alcohol .....	3 640	3 469
Wilful damage .....	710	564
Prostitution .....	30	24
Drunkenness .....	3 570	3 306
Indecent behaviour .....	105	73
Indecent language .....	1 026	942
Other disorderly behaviour .....	1 228	1 078
Resist arrest .....	476	404

(a) Does not include defendants committed for trial in a higher court.

Special magistrates are appointed under the Justices Act, 1921-1984 and the Local and District Criminal Courts Act, and each appointment must be approved by the Chief Justice. Generally they are required to be practitioners of the Supreme Court who have been practising for some years. The Justices Act allows for two justices of the peace to hear cases in Courts of Summary Jurisdiction. In 1981, justices of the peace presided over 33 per cent of cases heard in country courts and 2 per cent of those heard in metropolitan courts.

## CHILDREN'S COURTS

Proceedings in Children's Courts are regulated by the Children's Protection and Young Offenders Act, 1979-1984 which came into force on 1 July 1979, replacing the Juvenile Courts Act, 1971-1975. The Senior Judge appointed under the new Act exercises administrative control over Children's Courts throughout the State.

**Juvenile Offenders Before Children's Courts and Aid Panels, South Australia, 1983-84 <sup>(a)</sup>**

Type of Offence	Children's Courts	Children's Aid Panels	Total
Against the person .....	387	204	591
Theft .....	2 085	3 988	6 073
Driving and traffic (b) .....	448	254	702
Drug offences .....	280	218	498
Other offences .....	2 089	1 919	4 008
<b>Total offenders .....</b>	<b>2 643</b>	<b>5 702</b>	<b>8 345</b>
Males .....	2 341	3 888	6 229
Females .....	302	1 814	2 116

(a) Under 18 years. Excludes truants and children found to be neglected, destitute or uncontrolled.

(b) Excludes most minor traffic offences.

Children's Courts may be presided over by a judge or magistrate. Special justices assist in dealing with most of the traffic offences and some summary matters. Limitations are imposed on the jurisdiction of the courts depending on whether a judge, magistrate, or justices of the peace have been appointed to preside.

Children's Courts may not try homicide offences. In cases of very serious offences or persistent serious offending, an order for the child to be tried in an adult court may be obtained. A child may elect to be tried as an adult and, if found guilty, be subject to the penalties set by the Children's Court.

Screening panels decide whether a young offender appears before a non-judicial tribunal called a Children's Aid Panel or a Children's Court.

Most first and minor offenders are referred to the aid panels for consideration. Children's Courts are closed to the public. Members of the Press may be present, but they are generally restricted to publishing the results of the proceedings and may not identify any child concerned in the proceedings.

Penalties imposed by a Children's Court range from a bond or fine, with or without recording a conviction, to a sentence of detention in a training centre for a period between two months and two years. When a period of detention is imposed, reports are required on the social background and circumstances of the child and these are reviewed throughout the period of detention. Payment of compensation may also be ordered as a rehabilitative and not a punitive measure.

Where mandates are issued for detention in default of payment of fines and costs or in default of compliance with an order for the payment of money other than a fine or costs, such detention may be satisfied by periodic non-residential detention (community services under supervision).

A child who is dissatisfied with a finding may appeal to the Supreme Court or may apply to have the order reconsidered in the Children's Court.

Children's Courts also deal with neglected children where the Director-General of Community Welfare applies for a declaration that a child is in need of care and that he be placed under the guardianship of the Minister of Community Welfare.

## Adoptions

The Adoption of Children Act, 1966-1980 is administered in conjunction with the Department for Community Welfare. More information on adoptions in South Australia can be found in the section on State Welfare Services in Part 6.6.

## CORONERS COURT

The principal function of the office of Coroner is the detection and deterrence of secret homicide. The Coroner performs an investigative role into both natural and unnatural deaths, and although from time to time the Coroner has been given a Criminal Jurisdiction, this is not currently the case and he performs an investigative role only.

The Coroner also inquires into the causes and origins of all fires causing damage to persons or property and into the disappearance from or within the State of any person.

Pursuant to Section 7 (1) of the Coroners Act, 1975, a State Coroner is appointed. He is a legal practitioner and also a Special Magistrate and has a state-wide jurisdiction. He has the power to hold inquests into deaths, fires or disappearances or to direct another Coroner to do so.

Additional Coroners are appointed pursuant to Section 11 of the Coroners Act. However, these Coroners have no power to hold any inquest unless directed to do so by either the State Coroner or the Attorney-General. Deaths and fires outside the Adelaide area are all reported to the Local Coroner, who is appointed under Section 11 and who forwards all completed files to the State Coroner for final decisions as to whether an inquest is necessary.

## JURY SYSTEM

The procedure in relation to juries is governed by the Juries Act, 1927-1984. Indictable offences are tried before a Judge and twelve jurors sitting in the criminal jurisdiction of either the Supreme Court or District Court, depending on the gravity of the offence. In South Australia, for many years juries have not officiated when civil cases were being tried.

Jury districts for the metropolitan and certain country areas are fixed by proclamation pursuant to the Juries Act and consist of a number of subdivisions of the House of Assembly electoral districts. Legislation passed in 1965 provided for women to serve on juries as well as men, and, with certain exceptions, all persons over the age of twenty-five and under sixty-five who are enrolled as House of Assembly electors within the proclaimed jury districts are qualified and liable to serve as jurors.

Persons who may claim exemption from liability to serve are listed in the third schedule to the Act and include Judges, Members of Parliament, certain public officers, members of the defence forces, clergymen, legal practitioners, magistrates, university professors, police officers, doctors, dentists, pharmacists, opticians, physiotherapists, veterinary surgeons, newspaper editors and school teachers.

A jury list is compiled annually for each jury district. The names of persons included in the list are selected by computer process from the appropriate House of Assembly electoral rolls at the direction of the Sheriff. The jurors summoned to hear and determine an issue are later selected by ballot. Accused persons and the Crown each have the right to challenge three jurors without assigning reasons. About 2 000 persons serve on juries each year in South Australia. A jury pool system was instituted in 1974 and juries now may be required to serve in both the Supreme and District Courts during their month of service. An amendment to the Juries Act was passed in 1984, and is expected to be proclaimed in 1985. The Amending Act will influence the age and qualifications of jurors.

### APPEAL TRIBUNALS

The Appeal Tribunals comprise a number of tribunals and courts which are administered collectively by the Appeal Tribunals staff who are members of the Courts Department. The tribunals and courts can be presided over by Judges of the District Court; a Judge of the Family Court of Australia; and a Stipendiary Magistrate, who also sits as a Warden. Other members can be Commissioners of the Planning Appeal Tribunal and part-time members who are appointed to sit on the various tribunals because of their particular expertise or knowledge. Examples of appeals heard are those against decisions of the Health Commission in relation to air pollution, those against the Builders Licensing Board and inquiries by the Board into the conduct of persons holding licences under the Builders Licensing Act, and those against the Corporation of the City of Adelaide and/or the City of Adelaide Planning Commission concerning refusal to allow for the development of land and buildings within the City.

Other Appeal Tribunals include the Handicapped Persons Discrimination Tribunal, the Sex Discrimination Board and the Superannuation Tribunal.

### STATE INDUSTRIAL TRIBUNALS

Industrial arbitration in South Australia was inaugurated in 1894 by the establishment of Boards of Conciliation. Since then the system has undergone fundamental changes from time to time and the present basis is the Industrial Code, 1967-1977, under which the Industrial Court, Industrial Commission, Conciliation Committees and Commissioners have been established. For details on the composition of these bodies and their functions see Part 7.2.

### LICENSING COURT

The licensing of hotels and the issue of liquor licences and permits is governed by the Licensing Act, 1967-1985 under which is constituted a Licensing Court consisting of a Licensing Court Judge, Special Magistrates designated by the Governor as members of the Licensing Court, and Licensing Court Magistrates. The classes of licence that may be granted are:

Full publican's licence	Railway licence
Limited publican's licence	Restaurant licence
Wholesale storekeeper's licence	Limited restaurant licence
Retail storekeeper's licence	Cabaret licence
Wine licence	Theatre licence
Brewer's Australian ale licence	Special licence
Distiller's storekeeper's licence	Twenty litre licence
Vigneron's licence	Hotel broker's licence
Club licence	Tourist facility licence
Packet licence	

Fees for licences are paid in accordance with the amount of liquor purchased (or in some cases sold) during the preceding twelve months. From February 1984, in the case of the retail licences, fees are calculated at two per cent of the amount of low-alcohol liquor purchased, as previously, and twelve per cent of the amount of other liquor, in lieu of nine per cent as previously. However, a government decision to reduce the percentage fee payable by licensees has resulted in a rebate to licensees of the two per cent low-alcohol fee and one percent of the fee for other liquor.

In December 1976, legislation was enacted to authorise discretionary hotel bar trading hours from 5 a.m. to 12 midnight, Monday to Saturday, and to fix obligatory trading hours, Monday to Saturday from 11 a.m. to 8 p.m.

In the case of a full publican's, limited publican's and restaurant licence, liquor may be sold and disposed of in the dining area at any time on any day with or ancillary to *bona fide* meals.

The Court may upon the granting or renewal of a full publican's licence, having regard to the needs of the public, exempt the holder of the licence from the obligation to supply lodging. A limited restaurant licence authorises the consumption of liquor at any time on any day in the premises specified in the licence, with or ancillary to *bona fide* meals, by persons bringing the liquor onto the premises for their own consumption.

#### Liquor Licences Current and Permits Issued, South Australia

Licence or Permit	Year ended 30 June			
	1981	1982	1983	1984
<b>Licences:</b>				
Publican's;				
Full .....	609	611	609	610
Limited .....	77	82	85	89
Storekeeper's (a) .....	197	198	201	202
Vigneron's .....	116	123	132	148
Club .....	270	280	287	296
Restaurant .....	334	374	401	443
<b>Permits:</b>				
Special licensed premises .....	2 160	2 188	2 252	2 563
Special unlicensed premises .....	21 476	21 009	20 851	20 090
Booth .....	10 049	9 790	9 843	9 884
Club .....	2 381	2 570	2 478	2 266
Other .....	1 675	2 142	2 042	2 230

(a) Covers wholesale, retail and distiller's.

Permits may be granted under certain circumstances to extend the trading hours of licensed premises and to allow the sale, supply or consumption of liquor in unlicensed premises. Permits may be granted to clubs, for periods of up to one year, for the sale and supply to members for consumption on club premises—at 30 June 1984, 866 of these permits were current. Clubs whose takings from the sale of liquor exceed \$50 000 in any one year are not eligible for a permit but are required to apply for a club licence.

In April 1982, legislation was enacted which introduced a tourist facility licence to authorise the licensee to sell or supply liquor in the premises and upon conditions specified in the licence. The licence is not granted unless the Court is satisfied that the licensing of the premises is likely to enhance the tourist industry in the State, and no other single licence under the Act (other than a full publican's licence) would provide adequately for the needs of members of the public resorting to the premises.

The legislation also provided that:

- (a) the Court may, by endorsement on a full publican's licence, authorise the holder to sell and dispose of liquor under the licence on a Sunday during a period of not more than two hours or during two separate periods, each of which is not more than two hours and which are separated by an interval of not less than two hours, if it is satisfied that the sale and disposal of liquor by the licensee on a Sunday is required to satisfy a demand by tourists in the vicinity of the licensed premises;
- (b) the Court may also grant a late night permit to the holder of a full publican's licence, a limited publican's licence or a restaurant licence where the Court

is satisfied that the licensee proposes to provide entertainment on premises of a high standard, and that the permit will be of benefit to members of the public attending that entertainment. A late night permit shall authorise the sale, supply and consumption of liquor in accordance with the licence held by the permit holder, on that part of the licensed premises to which the permit relates, between the hours of 9 p.m. and 3 a.m. in the following morning;

- (c) the holder of a distiller's storekeeper's licence may, if the Court so authorises by endorsement on the licence, sell or supply liquor in any quantity for consumption on a specified part of the licensed premises with, or ancillary to, a *bona fide* meal, and the holder of a vigneron's licence may, if the Court so authorises by endorsement on the licence, sell or supply wine or brandy in any quantity for consumption on a specified part of the licensee's premises with, or ancillary to, a *bona fide* meal.

In November 1983 legislation was enacted which prohibited the granting of any further late night permits except in circumstances where a late night permit was in force within three months prior to the date of commencement of the legislation. If such a permit is granted it can not operate in respect of a part of the premises which is greater in area than that part of the premises to which the former permit related, and must impose conditions which are at least as stringent as those imposed on the former permit. This legislation was deemed to have come into operation on 31 August 1983.

In May 1984 further legislation prohibited the granting of the following classes of licence: wine licence; distiller's storekeeper's licence; club licence; cabaret licence; twenty litre licence.

This legislation was deemed to have come into operation on 18 April 1984.

### BANKRUPTCY

Since 1928 bankruptcy has been under Commonwealth Government jurisdiction. Under the *Bankruptcy Act 1966* South Australia is a bankruptcy 'district' and jurisdiction is exercised through the Federal Court of Australia.

A sequestration order cannot be made on a creditor's petition if the debt is less than \$1 000. Preferential creditors include employees for amounts owing in respect of wages and salaries, workers compensation, long service leave, annual leave, recreation leave or sick leave, and the Commissioner of Taxation for tax instalment deductions.

A bankrupt who has not previously been discharged is automatically discharged after three years unless an objection is filed with the Registrar in Bankruptcy.

#### Bankruptcies: Number, Liabilities, Assets, South Australia

Year	Bankruptcies and Orders for Administration of Deceased Debtors' Estates			Compositions, Deeds of Arrangement and Deeds of Assignment			Total Debtors
	Number	Assets	Liabilities	Number	Assets	Liabilities	
		\$	\$		\$	\$	
1979-80 .....	964	2 328 092	9 985 499	52	2 841 137	4 095 200	1 016
1980-81 .....	952	3 439 325	14 105 295	60	1 977 032	11 612 579	1 012
1981-82 .....	804	1 600 988	11 951 660	56	2 690 839	7 615 897	860
1982-83 .....	912	1 341 651	15 100 416	50	2 107 217	4 297 747	962
1983-84 .....	775	1 838 837	13 370 569	42	1 498 979	9 564 899	817

### LEGAL PROFESSION

Legal practitioners in South Australia are entitled to act as either barristers or solicitors, although some practitioners elect to practise only in one of these capacities. All practitioners have a right of audience in all Courts of South Australia except the Supreme Court, where only principals have this right.

After completing the prescribed academic training, followed by a period of practical training in a legal practice course or in articles, aspirant practitioners apply to the Full Court of the Supreme Court for admission to practise, and are issued with a Practising Certificate which is subject to annual renewal.

Rules of Court regulate the conditions of entry into the legal profession and the Legal Practitioners Act, 1981-1982 provides the basis for control of legal practitioners in such areas as discipline, remuneration, accounting for trust funds and the qualifications of notaries public. The Act provides for the investigation of complaints by the Legal Practitioners Complaints Committee and the hearing of charges of unprofessional conduct by a Disciplinary Tribunal. A Lay Observer appointed by the Attorney-General is entitled to be present at proceedings of the Committee or Tribunal. A complainant who is dissatisfied with proceedings before either the Committee or the Tribunal may make representations to the Lay Observer. The Disciplinary Tribunal may make an order as it sees fit or recommend that disciplinary proceedings be commenced in the Supreme Court.

In 1983 there were 1 260 legal practitioners entitled to practise in South Australia.

Members of the legal profession voluntarily provide an advisory service outside normal business hours. Any person may obtain preliminary legal advice through this service for which a nominal charge is made. The service operates at Adelaide and at seven suburban and country locations.

### LEGAL SERVICES COMMISSION

The Legal Services Commission, constituted under the provisions of the Legal Services Commission Act, 1977-1983, is responsible for the provision of all legal assistance in South Australia and provides free legal advice to any person.

The Commission provides legal advice in any matter as well as providing representation in court proceedings. These services are subject to a flexible means test, and to guidelines laid down from time to time. Legal services may be provided either by lawyers employed by the Commission or by private practitioners.

The Commission is administered by an independent statutory body which includes representatives from a variety of groups in the community. It is jointly funded by the State and Federal Governments and includes a Research and Education Section which is responsible for issuing pamphlets and other educational activities to advise people of their legal rights and duties.

The South Australian Law Society conducts some evening legal advisory services, at no cost to pensioners and students, and at a nominal charge to others.

Community legal services provide services, including evening advisory sessions, to those in need. Other voluntary organisations are now including legal advice sessions in their inventory of services.

### CONSUMER PROTECTION

Consumer protection in South Australia, in common with the other States, is a responsibility divided between the Commonwealth and State Governments. The major

arm of Commonwealth responsibility is the Trade Practices Commission; the relevant State instrumentality is the Department of Public and Consumer Affairs. In practice, the Trade Practices Commission intervenes only in multi-State matters or where exemplary legal action is called for. The State looks into matters involving consumer redress.

The South Australian Department of Public and Consumer Affairs was formed in 1976 from units of several existing departments. A number of divisions of the Department are involved in consumer protection work.

The Consumer Affairs Division, headed by the Director of Consumer Affairs, has brought together the former Consumer Services and Standards Branches into one unit. This Division deals with most general consumer complaints, and generally supervises twenty-four Acts including the Consumer Credit, Consumer Transactions, Manufacturers Warranty, Door-to-Door Sales, Unfair Advertising, Second-hand Motor Vehicles, Fair Credit Reports, Prices, Packages, Trade Measurements, Trade Standards and Flammable Clothing Acts.

The following table shows an analysis of complaints investigated by the Consumer Affairs Division for the year ended 30 June 1984.

**South Australian Department of Public and Consumer Affairs, Consumer Affairs Division  
Analysis of Complaints, 1983-84**

Particulars	Complaints	
	Number	Per Cent
<b>Practice complaints (a) :</b>		
Advertising, representations .....	256	3.0
Packaging or labelling .....	8	0.1
Sales methods .....	256	3.0
Prices and charges .....	576	6.8
Quality of product or service .....	3 646	42.9
Credit practices .....	346	4.0
Contracts .....	2 327	27.4
Guarantees and warranties .....	859	10.1
Offers of redress .....	299	2.7
<b>Total practice complaints .....</b>	<b>8 573</b>	<b>100.0</b>
<b>Product complaints:</b>		
Food, beverages, tobacco .....	53	0.6
Clothing, footwear, drapery .....	211	2.5
Consumer durables .....	1 418	16.7
Motor vehicles and other transport equipment .....	1 982	23.4
Building and constructions .....	1 662	19.6
Miscellaneous products .....	593	7.0
Transport and energy services .....	239	2.8
Insurance and finance .....	430	5.1
Real estate and accommodation .....	1 345	15.9
Miscellaneous services .....	541	6.4
<b>Total product complaints .....</b>	<b>8 474</b>	<b>100.0</b>

(a) More than one practice complaint may occur with any one particular product.

The Prices Act requires the Commissioner for Consumer Affairs to take such steps as he thinks proper for informing the public on matters relating to consumer affairs. This is



undertaken by the Education Division of the Department, with particular emphasis on schools and in the area of consumers handicapped by age, low income, and other disadvantages.

The Residential Tenancies Branch administers the Residential Tenancies Act, 1978-1981. Landlords and tenants may make application to the Residential Tenancies Tribunal to arbitrate upon, and settle residential tenancy disputes.

The Commercial Licensing Branch comprises several licensing and disciplinary authorities supervising various industries, including credit providers, land agents, used-car dealers and builders.

Co-operation between the Commonwealth and South Australian authorities on a day-to-day basis ensures that duplication of activities is kept to a minimum.

### OFFICE OF THE COMMISSIONER FOR EQUAL OPPORTUNITY

The Commissioner for Equal Opportunity administers two State Acts of Parliament, the Sex Discrimination Act, 1975 and the Handicapped Persons Equal Opportunity Act, 1981. The Commissioner also administers the Commonwealth *Sex Discrimination Act 1984* under delegated powers from the Human Rights Commission.

The Commissioner handles complaints of discrimination on the basis of sex, marital status, pregnancy and physical impairment.

If people feel they have been discriminated against in the above areas, they can lodge a complaint with the Office of the Commissioner for Equal Opportunity. The complaint will be investigated, and the Commissioner will determine, on the basis of the information gained during investigation, to entertain the complaint. The complaint will then be resolved through conciliation.

Where a complaint is not resolved by conciliation, the Commissioner may refer it to the Sex Discrimination Tribunal or the Handicapped Persons Discrimination Tribunal to make a decision. These Tribunals consist of a chairperson (holding judicial powers) and two other members.

### PUBLIC TRUSTEE

The office of Public Trustee was established in 1881 and is regulated by the Administration and Probate Act, 1919-1984. The Public Trustee provides a service to the public by preparing wills for no charge and in the administration of estates and in the protection of infants and absentee beneficiaries in estates administered by private administrators. A person may appoint the Public Trustee to be the executor and trustee of a will or as trustee of any disposition of property creating a trust.

The Public Trustee, where directed by the Court, becomes administrator of certain deceased estates; acts as guardian of certain infants; controls a protected person's property under the Aged and Infirm Persons' Property Act, 1940-1984; and receives, invests and distributes for the benefit of widows and minor dependants, amounts awarded under the Workers Compensation Act, 1971-1983.

Under the Mental Health Act, 1976-1983 the Public Trustee has control of the estates of some patients, pursuant to appointments made by the Guardianship Board, and may be appointed to act for the estate of any person found to be of unsound mind.

The Public Trustee may be appointed under a Power of Attorney or as an agent by any person to conduct their business affairs while they are alive and may continue to perform these duties even though the person may cease to have legal capacity at a later date; he may be appointed as administrator of unclaimed property and as a custodian trustee.

## POLICE AND CORRECTIONAL SERVICES

## AUSTRALIAN FEDERAL POLICE

A Peace Officer Guard was formed in Australia in 1925. The Commonwealth Government amalgamated this with the Commonwealth Investigation Service in 1957. This new organisation became the Commonwealth Police Force in 1960.

In October 1979 the Commonwealth Police and the Australian Capital Territory Police were merged to form the Australian Federal Police which is the major law enforcement body of the Federal Government. A short time thereafter some members of the Australian Narcotics Bureau also became members of the force, and the investigations formerly carried out by them into drug related matters became the responsibility of the Federal Police.

The Australian Federal Police (AFP) counters breaches of Commonwealth Law, especially threats of major criminal activity against the Commonwealth, maintains peace and public order within the Australian Capital Territory, and gives support to Government initiatives in the area of law enforcement.

The Australian Federal Police attaches officers to the Island Territory Police Forces on Christmas and Norfolk Islands, and to the United Nations peacekeeping contingent on Cyprus. It also administers the Australian Police College at Manly, NSW and the two training colleges, Barton and Weston, in Canberra.

There are eight operating regions, with the headquarters of central Region situated in Adelaide. The number of AFP personnel stationed in Central Region at 31 October 1984 was 101.

## THE SOUTH AUSTRALIAN POLICE FORCE

The police force was first established in South Australia in 1838 and has been administered by a Commissioner of Police since 1840. Since that time the Force has grown to such an extent that a Deputy Commissioner and four Assistant Commissioners have been introduced. Each Assistant Commissioner has control of one of four major areas of the Force which have been designated Operations, Personnel, Crime and Services. The number of police officers has risen from 127 in 1851 to a current level of 3 057 in 1984.

Women police officers were introduced in 1915 giving the Force the distinction of being one of the first in the world to do so. In that year two female officers were sworn in, having equal rights with the male officers. Although by 1974 the number of women police officers was only thirty-six, at 30 June 1984 the number was 251.

The maintenance of law and order and the reduction of opportunities for criminal activity are the main functions of the uniformed branches. At 30 June 1983 there were thirty metropolitan regional and ninety-seven country police stations and offices.

**Police Personnel, South Australia**  
**At 30 June**

Personnel	1980	1981	1982	1983	1984
Executive officers(a) .....	44	45	40	42	48
Inspectors .....	64	61	65	67	68
Sergeants .....	478	476	487	493	491
Constables(b) .....	2 837	2 845	2 808	2 755	2 754
Total .....	3 423	3 427	3 400	3 357	3 361

(a) Includes superintendents.

(b) Includes trainees, cadets and probationary constables.

Each metropolitan region has a complement of traffic police. Their duties include policing the general regulations relating to road use, controlling traffic and improving road safety by ensuring the safe and efficient flow of traffic. Such services as speed detection, accident investigation and prevention and lecturing on road courtesy and safety are still maintained by units stationed at the Thebarton Police Barracks. A Traffic Intelligence Centre, using information gained from accident statistics, assists in the correct placement of speed detection units in relation to accident action centres.

The Criminal Investigation Branch in Adelaide comprises a compact specialist unit responsible for the investigation of major crime or crimes involving an unusual expertise. Criminal Investigation Units are also placed in major metropolitan and country stations. To ensure that the activities of these units are co-ordinated, a Bureau of Crime Intelligence at Police Headquarters studies crime trends, and circulates relevant information. Auxiliary services provided by the Modus Operandi, Records, Fingerprints, Photographic, Documents, Ballistics, Crime Scene and Laboratory Sections are essential aids to criminal investigations.

On 30 November 1978, a Special Tasks and Rescue Force (STAR Force) was formed with headquarters at Thebarton Police Barracks. The primary function of the Star Force is to provide a mobile patrol force of trained personnel skilled in the use of firearms, anti-terrorist tactics, crowd control, crime prevention techniques, underwater recovery and search and rescue operations.

The changing role of the police in the community, together with continual changes in law and investigational techniques, has resulted in special emphasis being placed upon the training of all personnel within the Force. Applications for cadetship are accepted from the age of seventeen and a half years and training commences at eighteen years of age. Applicants are accepted up to the age of twenty-nine years. Cadets are given a year of academic and practical instruction before graduation to operational duties. Following graduation, trainees serve a year's probationary period at induction postings before being permanently appointed. All personnel are required to undergo refresher and firearm training at selected intervals of service. In addition, courses are regularly conducted for such specialist appointments as prosecutors, detectives, technicians and instructors. At 30 June 1984 there were seventy-five cadets in training.

In 1971 the Department began using light aircraft for the transport of personnel and prisoners throughout the State. Three aircraft are now in service.

The following table gives details of the revenue and expenditure of the South Australian Police Force in recent years.

**South Australian Police Force, Revenue and Expenditure <sup>(a)</sup>**

Year	Expenditure			Revenue (c)	Net Cost
	Wages and Salaries	Other (b)	Total		
				\$'000	
1979-80 .....	57 387	13 524	70 910	3 891	67 020
1980-81 .....	69 152	13 833	82 985	4 109	78 876
1981-82 .....	78 164	14 708	92 872	7 786	85 086
1982-83 .....	88 083	14 553	102 636	12 501	90 135
1983-84 .....	93 478	17 430	110 908	14 671	96 237

(a) As reflected in Consolidated Revenue Account only—capital expenditure is met from Loan Fund.

(b) Includes Police Pensions Fund contributions and administrative costs. (c) Includes Road Traffic Act infringement fines and an allocation from Motor Vehicle Registration receipts, made through the Highways Department.

An extensive re-organisation of the general duty police in the metropolitan area was begun early in 1973. This involved the division of metropolitan Adelaide into three territorial regions, each commanded by a Chief Superintendent, the implementation of a sector system within these regions and the restructuring of patrol areas to give emphasis to personal contact between the patrol force and the general public. This re-organisation has been monitored on a continuing basis with a view to maximising the efficiency of the patrols. As a result, in August 1981, significant changes were made to the rostering and deployment of personnel and the methods of tasking the patrols by revised communication procedures. These changes were implemented to improve the stability, experience and accountability of patrol members with the intention of further developing co-operation and interaction with local communities. A further major review of metropolitan policing practices aims to assess the viability of operation from localised community bases. Portable UHF radio hand sets have been introduced to enable mobile and foot patrols to be in contact with each other and with their patrol base. In certain areas equipment, code named TARTA, has been developed to allow the patrolling officer to both make and receive telephone calls from the police vehicle *via* the Telecom exchange system. Telex and facsimile machines are also in use at certain main stations and within Police Headquarters.

In February 1979, a Research and Development Group was formed, directly responsible to the Assistant Commissioner, Services and under the command of a Chief Superintendent. Research and Development Group has under its control Organisational Services, Computer Systems Section and Policy Section. Projects relating to manpower planning, organisation and methods, workload and productivity, operational research, demographic and sociological research, operational crime research, policy research and industrial relations liaison are carried out by this Group. The Computer Systems Section is being used to explore the field of the computer's application to police oriented tasks.

The Police Community Affairs and Crime Prevention Branch was formed in 1973 to foster better relations between the police and the general public. An Aboriginal Liaison Officer (a police officer) is attached to this Section and deals directly with police/Aboriginal relations. A new branch known as the Policy Audit Section has been set up primarily to inspect operational units. The Internal Affairs Section investigates complaints against police. A Publications Section also functions within this unit to prepare and co-ordinate material for the updating and maintenance of manuals and other publications.

Early in 1974, a Dog Squad of six handlers and six dogs became operational; it now comprises twelve handlers and dogs. As well as carrying out foot and mobile patrol duties, the squad is used in tracking and drug searches.

Since the opening of the Eyre Highway in September 1976 two fully equipped four-wheel drive vehicles are being used for patrols between Ceduna and the Western Australian border.

On 1 January 1980 a Firearms Section was formed with headquarters at Hindmarsh Square, Adelaide. The section handles Registration, Licensing, Adjudication and Enquiries and is controlled by a Chief Inspector. At 30 June 1984, 274 997 firearms were registered.

On 7 March 1977 a Psychology Unit was formed with headquarters at Angas Street. This unit consists of three psychologists who assist in training, selection and counselling of police officers.

In 1975 a Staff Development Branch was formed with headquarters at Angas Street. This Branch is controlled by an Inspector and a First Grade Sergeant. It provides a career-path counselling service, administers external studies programs, administers the Staff Appraisal System and maintains a supply of personnel for specialist positions.

There are currently two Welfare Officers, accountable to the Commissioner of Police through the Assistant Commissioner, Personnel. The Welfare office is located at Greenhill Road, Dulwich. This section provides advice and assistance to police employees, to widows and dependants of deceased police members and retired police members, on financial, marital, health and other personnel problems.

In an effort to reduce the road toll, Random Breath Testing was introduced in October 1981. The legislation under which it operates is to be reviewed after three years and a decision made whether to retain this type of testing based on its effectiveness in reducing the road toll. The locations at which the units operate are chosen as a result of information gained by the Police Department's Traffic Intelligence Centre utilising accident statistics and other available data.

A system of Traffic Infringement Notices (on-the-spot fines) was introduced in January 1982. This brought South Australia into line with other Australian States using similar systems. Under the scheme, people issued with a notice can choose to pay the expiation fee fixed by regulation as an alternative to having the matter determined by a Court.

## CORRECTIONAL SERVICES

### Prisons

There are seven gaols and prisons administered by the South Australian Department of Correctional Services. Adelaide Gaol is a holding centre for remand and short-term sentenced prisoners. Yatala Labour Prison provides for long-term male prisoners under maximum and medium security ratings. Port Augusta Gaol, Port Lincoln Prison and Mount Gambier Gaol are medium security prisons which accommodate male and female prisoners. Cadell Training Centre on the River Murray is a dual purpose institution which operates as a pre-release centre for long-term prisoners as well as accommodating minimum security short-term prisoners. The Northfield Prison Complex is a multi-purpose prison. It accommodates high, medium and low security women and, in a separate area low security men in ten single dwelling units known as The Cottages. Four prisoners share each unit.

In addition, police prisons, serving as short-term detention centres for both males and females and situated mainly in the more remote country areas, hold prisoners on behalf of the Department of Correctional Services. Northfield Security Hospital, opened in November 1973, accommodates the criminally insane and those undergoing short-term psychiatric care and assessment. This modern hospital administered by the South Australian Health Commission and staffed by trained medical personnel, provides specialised treatment programs for both males and females.

The emphasis in South Australian prisons is on rehabilitation. Industrial and trade training in various fields is available in the institutions, enabling prisoners to be prepared for eventual outside employment. A wide range of correspondence courses is available through the Open College of the South Australian Department of Technical and Further Education under the supervision of staff from the college. Special migrant and remedial classes are also conducted by the Education Division of the Department. An innovation at the Cadell Training centre has been the establishment of a community-based education centre which caters for both trainees and members of the public from the surrounding districts. An assessment panel ensures that prisoners serving long-term sentences are correctly assessed for education, employment, social and other training purposes. In a wide range of matters affecting the well-being and after-care of prisoners and their families, the prison administration is assisted by chaplains, the Offenders Aid and Rehabilitation Society, the Salvation Army and other voluntary organisations. Community services rendered by prisoners include the provision of emergency fire service units and the production of soft toys for children's homes.

### Community Corrections

The Community Corrections Division has several district offices located in the metropolitan area and at Berri, Cadell, Port Augusta, Port Lincoln, Mount Gambier and Whyalla in the country. The Division is responsible for providing supervision and social casework services to probationers and parolees. Probation officers provide a professional social work service, including a wider range of treatment and management alternatives for offenders. The Community Service Order Scheme, initiated and administered by the Division, provides participating courts with a further alternative to imprisonment.

Community involvement in correctional services is fostered with a growing use of volunteers to supplement the work of the statutory staff, including the staffing of the Adelaide Court Information Service.

The following table shows the number of persons entering South Australian prisons and the offences for which they were sentenced.

**Prisons: Persons Received under Sentence**

Major Offence	1982-83		1983-84	
	Persons	Per Cent	Persons	Per Cent
Homicide .....	27	0.7	11	0.3
Assault .....	311	7.8	314	8.3
Sexual assault .....	55	1.4	47	1.2
Robbery and extortion .....	48	1.2	25	0.7
Fraud and forgery .....	124	3.1	109	2.9
Theft, break and enter .....	560	14.1	506	13.4
Property damage .....	79	2.0	76	2.0
Driving and related offences .....	672	17.0	747	19.8
Drink driving .....	268	6.8	349	9.3
Drugs .....	126	3.2	148	3.9
Against good order .....	288	7.3	267	7.1
Offensive behaviour .....	779	19.7	699	18.6
Breach of recognizance, suspended sentence, parole .....	579	14.6	385	10.2
Other .....	46	1.2	85	2.3
Total .....	3 962	100.0	3 768	100.0

### PUBLIC SAFETY

#### STATE EMERGENCY SERVICE

The South Australian State Emergency Service (SES), formerly the Civil Defence Organisation, was established in 1961 to provide protection for the public against the effects of wartime hostilities. As the threat of war has diminished, the emphasis has shifted progressively towards involvement in counter-disaster measures.

The Director leads the SES supported by a small permanent staff at State Headquarters, Thebarton, and ten Regional Officers located at Port Lincoln, Port Augusta, Port Pirie, Kadina, Berri, Murray Bridge, Mount Gambier, Holden Hill and two at Thebarton. These Regional Officers have the responsibility for the preparation of counter disaster plans at Regional, Divisional and local level.

The volunteers undertake training to develop their counter disaster skills. In the main, the courses are conducted by permanent SES staff in the State, however, selected persons attend courses conducted at the Australian Counter Disaster College, Mount Macedon, Victoria.

Funding is provided at both Commonwealth and State levels, including a separate equipment grant of \$100 000 made each year through the Commonwealth Natural Disaster Organisation. Such equipment is distributed according to unit requirements.

## FIRE SERVICES

### South Australian Metropolitan Fire Service

Provision for the establishment and maintenance of fire brigades in South Australia under the control and management of the Fire Brigades Board was first instituted in 1882. On 3 December 1981, the Fire Brigades Act Amendment Act was proclaimed; this dissolved the Fire Brigades Board and established a Corporation.

In accordance with its general duty of extinguishing fires and protecting life and property in case of fire, the Corporation maintains suitably equipped fire brigades in proclaimed fire districts in the Adelaide Metropolitan Area and in country towns. At 30 June 1984 there were forty-one fire brigade stations of which twenty-one were metropolitan and twenty were country. During the year 1983-84 these brigades received 9 808 calls of which 761 were false and malicious calls. Some of these brigades are staffed by permanent personnel and others by auxiliary firefighters, there being at 30 June 1984, 694 officers and firefighters, 183 auxiliary and eighty-six ancillary personnel.

In addition to its main function, the Corporation provides a service section for the regular maintenance of private fire equipment installed in public and private premises, and makes its officers available for inspection of premises and for advice on fire protection generally, as well as to demonstrate the use and handling of various types of first-aid fire equipment. The Fire Brigades Act, 1936-1981 provides that the expenses and maintenance of brigades be defrayed in the proportion of one-eighth by the State Treasury, three-quarters by insurance companies and one-eighth by the municipalities and district councils concerned.

Total contributions for 1983-84 were \$24 358 000 made up as follows; insurance companies \$18 268 500; municipalities and district councils \$3 044 750; and State Treasury \$3 044 750.

### South Australian Country Fire Services

The South Australian Country Fire Services (CFS) is a voluntary fire fighting organisation affording urban and rural fire protection to an area of 886 000 square kilometres, or approximately 90 per cent of South Australia. It is constituted as a statutory body under the Country Fires Act, 1976-84.

The CFS consists of 468 brigades, group committees, Regional and District Fire Fighting Associations with 18 440 members. The Service also provides personnel and equipment for salvage, vehicle accident rescue and assistance in emergencies where fire may not necessarily be occurring.

While rural type fires account for the majority of fires outside the South Australian Metropolitan Fire Service area, CFS brigades also provide protection for a number of urban fringe areas.

## South Australian Country Fire Services

Particulars	1982	1983	1984
Strength of service at 30 June:			
Affiliated organisations .....	464	492	468
Volunteer members .....	11 500	12 500	18 440
Fires attended in year ended 30 June:			
Structural/Vehicle .....	356	366	327
Rural .....	1 227	1 140	897
Area destroyed in bush fires (ha)	102 959	334 153	13 114
Financial losses (\$);			
Structural/Vehicle .....	3 328 834	3 596 000	3 248 575
Rural .....	3 727 730	204 852 000	720 001
Total Brigade callouts .....	2 220	2 357	1 956

## NATIONAL SAFETY COUNCIL OF AUSTRALIA SA DIVISION

The National Safety Council of Australia SA Division was formed in 1963 as the Industrial Accident Prevention Society of SA Inc., a voluntary non-profit educational body. It is an autonomous branch of the largest safety organisation in Australia devoting its entire resources to the reduction of accidents in most areas of the community. In South Australia the Council's efforts are devoted to occupational, child, home and water safety problems; traffic safety being the function of the Road Safety Council of South Australia. The SA Division is also responsible for servicing the requirements of members in the Northern Territory and regular visits are made to that area for safety training and promotional purposes.

The aims of the Council are carried out by the provision of safety consultant services, lectures, training courses and the distribution of safety publications and materials. Finance is derived from membership fees, services, an annual grant from the State Government and assistance from the Commonwealth Government. The Council's activities are controlled by a body representative of all spheres of community interest.

## ROAD ACCIDENT PREVENTION

The Division of Road Safety and Motor Transport of the Department of Transport was established in 1981 for the purpose of developing, co-ordinating and implementing road safety policy embracing education, enforcement and legislation, traffic regulation and vehicle design and safety. At the same time, the charter of the Road Safety Council was varied from its administrative responsibilities for road safety education to an advisory role, reporting directly to the Minister of Transport.

There are a number of other Government organisations involved in the promotion of road safety in South Australia including the Road Traffic Board, the Motor Registration Division, and the Police, Highways and Education Departments.

The primary role of the Division is to achieve greater co-ordination, consolidation and integration of the road safety effort in South Australia. Its administrative responsibilities presently extend to the promotion of road safety through media publicity and instructional activity, centred on its Road Safety Instruction Centre at Oaklands Park, vehicle inspection, regulation of the private bus transport industry, and road safety policy and research.



## WATER SAFETY AND LIFE SAVING

**Royal Life Saving Society—Australia**

The South Australian Branch of the Royal Life Saving Society—Australia was established in 1909. In 1952 an agreement was made with the Surf Life Saving Association whereby the Surf Life Saving Association undertook responsibility for life saving on ocean beaches, the Royal Life Saving Society retaining responsibility in all other areas of activity.

In South Australia the Society has developed into a large teaching body administered by a Council. Several clubs have been established and the Society gives instruction to schools and other interested bodies in the various methods of life saving, including the current methods of artificial respiration. This is done by honorary instructors and examiners. Classes of instruction are also conducted at all major public swimming pools throughout the State. Life saving patrols are conducted at inland waterways on weekends and public holidays during the warmer months. In the winter months the emphasis is on talks and demonstrations on resuscitation, but during the swimming season weekly life saving instruction and examination, and life saving demonstrations are conducted throughout the State. Awards totalling in excess of 37 000 were gained by candidates during the 1983-84 season.

The honorary work of the Society is financed mainly by grants made by the Government, by donations, and by the Society's own fund-raising activities.

**Surf Life Saving Association**

The South Australian State Centre of the Surf Life Saving Association of Australia was formed in 1952, with the co-operation of the South Australian Branch of the Royal Life Saving Society and the Surf Life Saving Association of Australia.

The Association has nineteen affiliated clubs and voluntary members give many hours to patrolling their respective beaches on weekends and public holidays from the beginning of November until the end of March. At 30 June 1984 there were 3 821 senior active, reserve, cadet, junior and other members, in Association clubs. From 1952 to the end of the 1983-84 season, 2 826 rescues were performed with no loss of life on patrolled South Australian beaches. During this same period many hundreds of persons received first-aid treatment and advice on water safety.

The South Australian State Centre receives an annual grant from the State Government and individual clubs have been assisted with subsidies for equipment and club houses.

**'Learn to Swim' Campaign**

Vacation swimming classes organised by the Education Department were first established in January 1956. During January 1984, approximately 40 000 children were enrolled at 240 centres throughout the State where instruction was provided by 1 165 qualified instructors for a period of ten days. The major aim of the program is to impart water safety knowledge, teach survival and safe swimming and to enable children to assist with a rescue by the safest and quickest method available.

Term time classes are available for children in government and non-government schools from Year 1 to Year 12. Approximately 120 000 children participated in swimming and aquatic programs in 1984.

The Education Department and the Royal Life Saving Society introduced new national survival, basic rescue and swimming proficiency awards into the program in 1983.

## 6.2 EDUCATION

Education is available to all South Australians in a wide variety of forms, some being provided by Government and others by non-government agencies. Constitutionally education is a State responsibility, but the Commonwealth makes grants for specific purposes. Education in this State can be seen as comprising three levels, namely, pre-school, school and post-school.

Pre-school education is provided by the Kindergarten Union, Education Department and some non-government schools and consists of a range of services available to pre-school children and their parents.

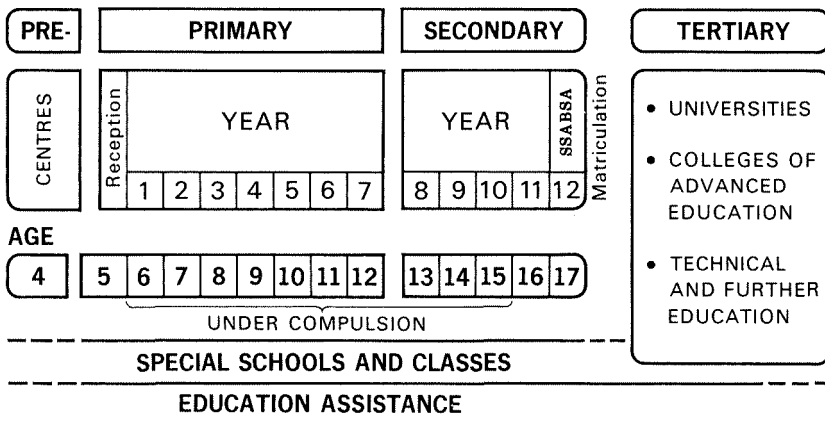
In South Australia attendance at school is compulsory for children from six to fifteen years of age. No child may be enrolled for the first time at a government school, other than a child/parent centre, before the age of five years. The admission of children aged five is provided for in all junior primary, primary and area schools at the beginning of each school term, but schools are encouraged to receive intakes more frequently.

Education at the primary and secondary level is available at government schools controlled by the Education Department and at non-government schools, which are required to be registered with the Non-government Schools Registration Board. Some non-government schools provide boarding facilities. In both government and non-government schools there has been a trend towards co-education in recent years. The term 'Year' is used to denote class level in both primary and secondary schools. Primary classes are designated Year 1 through to Year 7, and secondary classes Year 8 to Year 12. The present system of government schools and of compulsory education dates from the Education Act, 1875.

The education system in South Australia is summarised in the following diagram.

### SOUTH AUSTRALIAN EDUCATION SYSTEM

#### SCHOOL



A historical summary of education in South Australia was included on pages 153-4 of the *South Australian Year Book* 1969.

At the tertiary level the University of Adelaide, the Flinders University of South Australia and the colleges of advanced education are independently controlled but are financially dependent on government grants. Facilities for adult education are provided by the Department of Technical and Further Education and other organisations.

### PRE-SCHOOL EDUCATION

Established in 1905, the Kindergarten Union of South Australia is a statutory authority which operates under the Kindergarten Union Act, 1974-1975. Authority is vested in the Union's Board of Management, with the Minister of Education having Cabinet responsibility for the administration of the Act. The Union's Council represents parental and community interests.

In 1984 there were 311 centres distributed widely throughout the State. The education and care programs include pre-entry to school for five-year-olds, general educational programs for three and four-year-olds which encourage cognitive, social, emotional, physical, moral and creative growth, special clinical services for handicapped children, home-based activities for isolated children, full-day care, emergency care, out-of-school hours care, 'respite' care and specific parenting programs combined with group activities for babies and toddlers. In addition, staff of the Special Services Division assist parents to manage children who have specific learning difficulties and work closely with the Adelaide Children's Hospital, general practitioners, Health Centres, the Child, Adolescent and Family Health Service, the field staff of the Department for Community Welfare and other agencies.

Most centres operate two sessions per day. The customary program is for nine sessions per week, each of approximately three hours. In 1983 there were more than 33 000 children registered with the Union's centres.

In 1984 the Union operated four mobile kindergartens (from Berri, Clare, Waikerie and Salisbury) and eleven mobile resource units/toy libraries. The Union employed 965 staff in 1983; 893 were employed in the centres, including twelve Aboriginal pre-school assistants, nine ethnic assistants, twenty-four child care staff and ten mobile resource operators.

In 1974 the Education Department established its own pre-school centres, known as child/parent centres which are staffed by Education Department teachers and are usually located in the grounds of existing junior primary, primary and area schools.

The following table shows statistics on all known day care centres and pre-school centres in South Australia obtained from a census conducted by the Australian Bureau of Statistics during the week commencing 3 October 1983.

**Day Care Centres and Pre-school Centres, South Australia, 1983 <sup>(a)</sup>**

Particulars	Type of Centre				Total
	Kindergarten Union	Licensed by Department for Community Welfare	Government Schools	Other	
Number of centres .....	316	79	90	24	509
Capacity (per session) .....	9 931	2 926	2 377	516	15 750
Attendance (b) :					
Boys .....	12 653	2 157	2 813	327	17 950
Girls .....	12 025	1 914	2 655	349	16 943
Total .....	24 678	4 071	5 468	676	34 893

**Day Care Centres and Pre-school Centres, South Australia, 1983 <sup>(a)</sup> (continued)**

Particulars	Type of Centre				Total
	Kindergarten Union	Licensed by Department for Community Welfare	Government Schools	Other	
Paid staff (c):					
Qualified .....	739	295	195	51	1 280
Unqualified .....	472	249	105	23	849
Total .....	1 211	544	300	74	2 129

(a) Week commencing 3 October 1983.

(b) Total of enrolled and casual attendance during the census week.

(c) Includes part-time.

In 1984 there were 94 child/parent centres serving approximately 5 401 children and their families. Several centres cater for special needs, *e.g.* Aborigines in rural areas, or provide integrated services in co-operation with State welfare authorities and local community groups.

There are two committees with responsibility for advising the government on pre-school education and related matters. The Early Childhood Education Advisory Committee is responsible to the Minister of Education for advice on all aspects of the education of pre-school children. The Community Welfare Advisory Committee on Early Childhood Care is responsible to the Minister of Community Welfare for policy advice on child care centres, playgroups, family day care, child care in women's shelters and children of offenders.

**PRIMARY AND SECONDARY EDUCATION**

The State Government, through the Education Department, provides free facilities for primary and secondary education; however, parents may choose between government and non-government schools. The permanent head of the Department is the Director-General of Education, assisted by a Deputy and two Assistants, with a number of Directors responsible for the Central and Area Directorates.

For many years school councils, mothers clubs, parents and friends associations and welfare clubs have been raising large sums for the purchase of additional amenities.

In country areas many children are conveyed to government schools by free bus services provided by the Education Department. At the end of 1984 there were 681 bus services carrying an average of 25 000 students daily to 309 schools.

The Catholic school system is organised on a State-wide basis under the direction of the South Australian Commission for Catholic Schools. Similar State-wide organisations exist for the Seventh Day Adventist school system and Lutheran Primary school system.

**Schools**

In July 1984 there were 882 schools operating in South Australia; of these 632 were primary schools, 117 were secondary schools, 106 primary and secondary combined schools and 27 special schools. The Government, through the Education Department operated 708 schools while 174 were operated by non-government authorities.

**Students**

Enrolments in recent years, classified by government and non-government schools and by age of the students are given in the following tables.

**Full-time Students by Level of Study and Category of School, South Australia**  
**At or about 1 July**

Students	1982	1983	1984
Primary:			
Government .....	132 554	127 334	121 615
Non-government .....	26 020	27 183	27 343
Total .....	158 574	154 517	148 958
Secondary:			
Government .....	75 390	78 183	79 605
Non-government .....	19 952	21 087	21 913
Total .....	95 342	99 270	101 518
<b>Total Students .....</b>	<b>253 916</b>	<b>253 787</b>	<b>250 476</b>

**Full-time Primary and Secondary Students by Age, South Australia**  
**At 1 July 1984**

Age last birthday (years)	Non-government schools					All schools
	Government schools	Anglican	Catholic	Other	Total non-government	
Under 6 .....	14 264	284	2 372	870	3 526	17 790
6 .....	15 707	202	2 327	782	3 311	19 018
7 .....	15 605	205	2 371	856	3 432	19 037
8 .....	16 044	219	2 345	807	3 371	19 415
9 .....	16 627	243	2 509	787	3 539	20 166
10 .....	16 983	290	2 608	958	3 856	20 839
11 .....	18 032	323	2 646	967	3 936	21 968
12 .....	18 391	464	2 679	1 263	4 496	22 889
13 .....	18 951	509	2 897	1 330	4 736	23 687
14 .....	18 350	529	2 922	1 310	4 761	23 111
15 .....	16 058	475	2 635	1 304	4 414	20 472
16 .....	10 902	478	2 123	1 104	3 705	14 609
17 .....	4 097	211	1 002	599	1 812	5 909
18 .....	775	51	223	130	404	1 179
19 and over (a) ...	434	3	81	33	117	551
<b>Total students ...</b>	<b>201 220</b>	<b>4 486</b>	<b>31 830</b>	<b>13 100</b>	<b>49 416</b>	<b>250 636</b>

(a) Includes students with age unknown at time of census.

### Teachers

The number of teachers employed in primary and secondary schools in recent years is shown in the following table.

## Teachers, South Australia

At or about 1 July	Government Schools				Non-government Schools			
	Full-time		Part-time (a)		Full-time		Part-time (a)	
	Males	Females	Males	Females	Males	Females	Males	Females
1981 .....	6 263	7 079	150	980	946	1 258	52	271
1982 .....	6 143	6 696	216	1 159	1 033	1 320	71	313
1983 .....	6 234	6 576	209	1 235	1 082	1 395	76	349
Type of Teacher 1983								
Primary .....	2 269	4 131	65	685	332	828	24	166
Secondary .....	3 791	2 212	129	472	746	552	51	180
Other (b) .....	174	233	15	78	4	15	1	3

(a) Equivalent full-time units of part-time teaching.

(b) Includes teachers at schools for physically and mentally disabled, socially maladjusted or emotionally disturbed children, and teachers who are active in more than one type of school.

## PRIMARY EDUCATION

Children normally begin their schooling at the age of five years when they enrol for primary education at either a government or non-government school. Primary education involves a seven-year course.

In primary education at government schools the emphasis is on the child's active involvement in learning. The curricula are designed to extend children's experience of their environment, through social studies, science and mathematics. They provide for the development of all language skills, especially fluency in speech, writing and reading, and for creative activities in movement, music, art, drama and writing.

A new program in religious education has been introduced and an increasing provision is being made for the study of additional subjects, such as foreign languages, dance, instrumental music and aquatics.

Ancillary services and expert advice are provided for government primary schools through the Principals of the Educational Technology Centre and the School Libraries, Physical Education and Music Branches. There are also consultants in other subject areas who visit the schools and conduct in-service courses.

Non-government primary schools largely follow the government schools in their curricula, but the Education Department exercises no formal authority over these schools beyond requiring them to submit certain statistical returns relating to compulsory attendance.

## SECONDARY EDUCATION

Children who have completed their primary schooling are required by law to attend a secondary school, either government or non-government, until their fifteenth birthday.

The South Australian Education Department's policy is to provide comprehensive co-educational high schools which, consistent with their size and enrolment, offer the widest range of subjects and syllabuses possible in an endeavour to meet the needs and interests of individual students.

Students living in urban areas usually attend their local high schools which, apart from two schools, are now comprehensive, co-educational schools. An application may be made to enter any school but only the neighbourhood school can guarantee a place. In country areas, secondary education is provided by special rural schools, area schools or high schools depending on the size of the population being served.

All new schools built in recent years, and many existing schools, have been provided with gymnasiums, music and drama areas. The upgrading of schools and the provision of flexible-plan units in existing schools is continuing.

During the first three years of education at government secondary schools, students are introduced to as wide a range of subjects as possible. Each school is free to develop its own combination of subjects and to determine the amount of time spent on each, within departmental guidelines.

Specialisation increases in Years 11 and 12 when students tend to identify more clearly their vocational goals. The proportion of students of post-compulsory ages staying on at school has increased significantly in recent years. Partly in response to this trend the curriculum has broadened to include more non-tertiary senior school studies, particularly through the development of Transition Education initiatives aimed at assisting students in their changeover to employment or vocational studies. In this context the Education Department has embarked upon a number of research programs to identify students potentially at risk, and to generate new strategies to help this group. Link courses—part-time courses of a practical nature delivered in conjunction with the Department of Further Education, aimed at assisting senior secondary students to understand the world of work—make students aware of what is expected of them in the fields of employment they have studied, and provide an introduction to relevant skills.

Secondary school subject curriculum committees, which are comprised of representatives of a wide spectrum of interests associated with education, meet regularly to discuss courses of study and to establish new syllabuses for secondary students. Although syllabuses are distributed to all teachers, they are in no way prescriptive.

Secondary education is also provided by non-government schools; these schools, for the most part, are identified with various religious denominations. Non-government secondary schools usually charge fees, but a limited number of internal scholarships are available. In addition to normal day attendance some non-government schools offer boarding facilities for country students. Non-government schools provide (where appropriate) courses in technical education, business and commercial education and general education together with academic courses for those seeking admission to tertiary education after matriculation (Year 12).

Typing, shorthand and certain academic courses are provided at privately owned business colleges.

The similarity between courses in government and non-government secondary schools has resulted from the influence of the Public Examinations Board of South Australia (PEB) syllabus and the close liaison of the administration and teachers of both types of school.

In 1984 the PEB was replaced by the Senior Secondary Assessment Board of South Australia (SSABSA) which assumed responsibility for all PEB and former Senior Secondary Certificate course subjects. SSABSA is responsible for certification of Year 12 students and covers a wider curriculum than the former PEB, reflecting recognition that schools need to be more relevant to the society for which children are being prepared.

### **Area Schools**

The Education Department's area schools, which are located in some country districts, cater for both primary and secondary students. Because of their size the secondary curricula offered may not be as varied as that of a large metropolitan high school, but a similar breadth and balance is sought. However, the primary course is similar to that of primary schools.

### **Special Rural Schools**

The Education Department first established these schools in remote country areas in 1966 with the intention of supplying education in areas where it had been shown that

there was an obvious need for secondary education but where the establishment of an area school was not warranted. Primary courses, if provided, are comparable to those at primary schools, but secondary courses in these schools are restricted to the core subjects, English, social studies, mathematics, science, craft where facilities are available, and geography and/or history. Instruction usually does not proceed beyond Year 10 level.

### **Correspondence School**

Children who are unable to attend primary and secondary school, *e.g.* children living in remote areas, or who are physically or emotionally handicapped, may receive education through the Education Department's Correspondence School. Lessons are forwarded to cover academic, commercial and art subjects up to Year 11 standard. Assistance may take the form of full correspondence or supplementary courses. Supplementary courses are conducted through a primary school head teacher who may, in the case of remoteness from secondary school facilities, conduct grades beyond Year 7. Courses are also supplied to students in smaller secondary schools who wish to do a specific subject which is not available because of staffing problems. The service also reaches itinerant families and those travelling overseas.

Port Augusta School of the Air supplements the work of the Correspondence School. It provides two-way radio contact and various other services to facilitate personal interaction. Written work provided by the Correspondence School is marked by staff of the School of the Air and the Correspondence School. Co-operation between the Correspondence School and the Broken Hill School of the Air assists with education of children living on the New South Wales-South Australian border.

Although isolated students who wish to do matriculation studies (Year 12) are enrolled through the South Australian Open College, a Department of Technical and Further Education service, some adult students, whose level of literacy and numeracy makes it difficult to work through the Open College, do enrol in the Correspondence School. In 1984, 709 secondary students were enrolled at the Correspondence School, including 341 students attending other schools. There were 139 adult students. With the 337 primary students, this made a total of 1 052 students enrolled at the Correspondence School in December 1984.

### **Special Education**

The Special Education Section of the Education Department provides education for disabled children in a variety of settings. The general policy is that children should be educated in the most regular situation possible and that a range of options should be available. Options provided include special schools, full-time special classes, part-time special classes, support teachers within ordinary schools helping children and teachers in regular classes, and support teachers working outside their home base schools. In addition, a variety of arrangements are entered into in which groups of disabled children and their teachers are combined with regular groups and their teachers in a single complex. Specific provisions are made for hearing-impaired children (all within centres in regular schools plus support services), visually-impaired children (one small special school plus support services), moderately intellectually disabled children (mostly in special schools but occasionally in special or regular classrooms), physically disabled children (in both special and regular schools) and others.

Special schools are conducted for day students and within institutions for children in residence.

Similar options are available within the Catholic Education system.



### **Migrant Education**

Educational programs for migrant children from non-English speaking backgrounds are conducted by the Education Department, with Commonwealth funding, through the Language and Multi-Cultural Centre.

The Centre's programs operate in two distinct phases. The first phase is designed for new arrivals and consists of intensive language instruction at resource centres. The second phase consists of on-going support in schools and is available to all schools as required.

The Centre provides a range of advisory services to schools, including a specialist Resource Centre, covering the teaching of English as a second language, languages other than English and a general education for a multicultural society.

### **Aboriginal Education**

The Aboriginal Education Section of the Education Department provides education for Aboriginal children who live in remote areas and in Aboriginal communities. Special liaison services and additional support services are also offered to Aboriginal children in other schools.

In traditional communities, where the main language is not English, a bilingual program has been established. These schools offer post-primary courses which include technical studies.

Advisory staff and curriculum developers provide a support service for all Aboriginal schools and liaise closely with teachers of Aboriginal children in other schools. In addition, Aboriginal Education Workers, Home School Visitors and Aboriginal Resource Teachers have been appointed to develop understanding between Aboriginal families and the schools. Aboriginal Studies programs, developed for use in both primary and secondary schools, have provided a further means of establishing this understanding.

### **School Libraries**

The rapid growth in school library service experienced in South Australia during the 1970s has slowed down during the 1980s.

Advances have continued in the quality of service being offered, with improvements in the qualifications and experience of many teacher-librarians. Librarians are playing an increasingly important role in supporting the learning which takes place in schools through the provision of appropriate resources and the expertise of staff educated in their selection and use.

The introduction of SAERIS (SA Education Resources Information Service), which links computer and micrographic technology to provide a centralised cataloguing service to schools, has had a major impact on the way teacher-librarians use their time. Further assistance in library organisation is now being provided by micro-computers. Library aides are used in many facets of automation, thus freeing teacher-librarians to become fully involved in the processes of curriculum design and implementation.

Sharing of resources in formal and informal networks is now accepted as both necessary and desirable. (Much of this sharing is also facilitated by the use of automation.) Resource sharing applies to physical materials such as books, non-print media and audio visual hardware, as well as to staff expertise through the development of locally based hub, district and area groups. Sharing of professional expertise is seen as vital in the support of people who are often isolated from their professional peers.

Since the opening of the first rural school community library in 1977, many such services have been established and it is anticipated that close to fifty school community libraries will be in operation by the completion of the program in 1986. The success of the

school community library movement has resulted in a viable library service for many rural areas of the State and has focussed international attention in this respect upon South Australia.

In 1984 there was a change in the provision of centralised support for school libraries with the split of the School Libraries Branch into two units: the Library Resource Development Unit which concentrates on policy development and the Library Resource Branch which offers practical support. Links with schools are provided in the form of a newsletter, LINES (Library Information Network Exchange Service), the first issue of which was published in February 1985. Both of the centrally based groups work in close co-operation with area based advisory personnel to give a library support service to schools.

#### Government Schools: Library Statistics, South Australia

Particulars	Unit	1981	1982	1983	1984
Teacher-librarians .....	No.	611	628	617	625
Library aides .....	No.	781	847	908	878
Books held .....	million	4.1	4.2	4.2	4.4
Other materials .....	million	1.1	1.1	1.1	1.1
Amount spent .....	\$ million	2.4	2.6	3.0	3.2

#### Matriculation Assessment on Senior Secondary Assessment

In 1984 the Senior Secondary Assessment Board (SSABSA) took responsibility for matriculation examinations conducted at the completion of the twelfth year of schooling. These were previously the responsibility of the Public Examination Board (PEB). The examination result counts for 75 per cent and the moderated school assessment for 25 per cent of the total score.

SSABSA is also responsible for the School Assessed Subjects in the twelfth year. They are subject to testing to ensure adherence to a state-wide standard. School Assessed Subjects were previously the responsibility of the Education Department of South Australia.

#### Matriculation: Candidates and Subjects Presented, South Australia

Subject	1981	1982	1983	1984
Accounting .....	—	—	504	1 138
Ancient languages .....	23	21	19	26
Art .....	1 116	1 092	1 230	1 175
Asian languages .....	268	404	456	362
Biology .....	4 586	4 526	4 712	4 617
Chemistry .....	2 766	3 184	3 236	3 019
Classical Studies .....	1 133	1 139	1 259	1 166
Drama .....	—	—	149	250
Economics .....	2 844	2 923	2 950	2 762
English .....	5 307	5 501	5 511	5 324
Geography .....	2 899	2 828	3 005	2 619
Geology .....	1 280	1 178	1 113	885
History .....	3 731	3 764	4 027	3 719
Legal Studies .....	—	—	—	239
Mathematics 1 .....	2 434	2 703	2 631	2 427
Mathematics 2 .....	2 425	2 699	2 632	2 428
Mathematics 1S .....	2 369	2 709	2 932	2 898
Music .....	540	489	480	515
Physics .....	2 908	3 324	3 355	3 158
Other modern languages .....	1 292	1 305	1 292	1 267

### Education Assistance

The Commonwealth Government, the State Government and various private benefactors provide assistance to various categories of primary and secondary students.

#### *South Australian Government*

In 1984 a School Support Grant was paid to all Government schools; \$1 280 per primary school plus \$27.80 per student, and \$6 350 per secondary school and \$71.50 per student. This grant was combined with parent funds to provide for all curriculum and administrative materials and equipment, repairs, freight and bottled gas. For Government schools this grant incorporates the earlier Primary and Secondary Book and Materials Grants.

For non-government schools a Book and Materials Grant of approximately \$14 per primary student and \$47 per secondary student is paid. The State Government also pays a per capita grant of \$200 per primary student and \$321 per secondary student for children attending registered non-government schools. Additional payments were made on a needs basis in 1984 of \$100 to \$300 per primary student and \$160 to \$482 per secondary student.

Students who have to travel considerable distances to the nearest school, or school bus, may also receive travelling expenses.

#### *Commonwealth Government*

The Commonwealth Scheme of Assistance for Isolated Children assists the parents of students who do not have reasonable daily access to an appropriate government school. The main aim of this scheme is to assist student children whose homes are geographically isolated. However, assistance is also available in certain circumstances to children with disabilities who must live away from home to attend school or study by correspondence and to students undertaking a special type of course or specialised remedial teaching. Students who must live away from home to undergo diagnostic testing of an educational nature may also be assisted, as may students from itinerant families. In a few cases where this assistance is not available the State Government pays boarding allowances.

The Secondary Allowances Scheme aims to provide assistance to families with a limited income so that they may maintain their children at school for the final two years of secondary education. Under this scheme an allowance of up to \$1 202 a year may be paid subject to a means test.

The Commonwealth Government also provides financial assistance for the education of students of Aboriginal or Torres Strait Island descent who attend approved secondary schools. This assistance is provided under the Aboriginal Secondary Grants Scheme. The grants are open to full-time students under the age of twenty-one who attend an approved secondary school. Grants also may be made available to full-time students who attend an approved primary school provided the student is fourteen years of age. Benefits under this scheme comprise textbook and uniform allowances, living allowance, personal allowance and fees. Students who must live away from their normal place of residence in order to attend school may be eligible for a boarding allowance in lieu of living allowance, and for up to three return journeys to their home each year.

### OTHER ASSISTANCE

Under the Adult Secondary Education Assistance Scheme the Commonwealth Government provides assistance to adult students undertaking full-time Year 11 and 12 courses at technical colleges, secondary schools and other approved institutions. This assistance is available subject to an income test and certain conditions of eligibility.

Assistance under the scheme may include living allowance, incidentals allowance, allowance for a dependent spouse and/or child, and fares allowance. An applicant must be eligible for living allowance in order to receive any of the other benefits and the provision of living allowance is subject to an income test. The maximum rates of living allowance are \$2 048 at the home rate, \$3 308 at the away from home rate and \$3 581 at the independent rate. In addition each student receiving the 'at home' or 'away from home' rates may receive up to \$273 in lieu of family allowance paid in respect of the student by the Department of Social Security.

### TERTIARY EDUCATION

The Tertiary Education Authority of South Australia was established on 1 July 1979 to promote, develop and co-ordinate tertiary education in South Australia.

The Tertiary Education Act, 1979-83 the Authority with responsibility for the co-ordinated development of the three sectors of tertiary education—universities, colleges of advanced education and further education. The Authority is also the State accrediting authority for advanced education and further education awards; it provides advice on the allocation of capital and recurrent funds to post-secondary institutions and is responsible for the overall planning of the State's provision for tertiary education.

The Authority is empowered to consult and negotiate with national authorities concerned with tertiary education, including the Commonwealth Tertiary Education Commission and the Australian Council on Awards in Advanced Education.

The University of Adelaide and Flinders University, together with the other tertiary institutions in South Australia, have established the South Australian Tertiary Admissions Centre to which all students wishing to enrol in any of the institutions must apply for admission. Admission is subject to selection within the quota and is based on academic merit.

### UNIVERSITIES

#### The University of Adelaide

The University of Adelaide was established in 1874 by Act of Parliament and the academic work of the University began in March 1876. As with the other Australian universities, the University of Adelaide was predominantly concerned during its first half-century with teaching undergraduates. However, after the 1939-45 War the University embarked upon research in a substantial manner, adopting a conscious policy of developing post-graduate studies and encouraging original investigations and research by members of its staff. The science-orientated disciplines took the lead but were soon followed by others.

The University has continued to place strong emphasis on research and this involvement is reflected in the comparatively high proportion of post-graduates undertaking higher degrees by research in 1984; 16.8 per cent of the student load was attributable to research higher degree enrolments, the highest proportion of all the established State universities.

The research activities of the University attract considerable outside funding in addition to Commonwealth recurrent funding of \$63 million per annum for teaching and research. Grants totalling \$7 335 000 were received in 1984, including \$2 025 146 from the Australian Research Grants Scheme.

The governing body of the University of Adelaide is the Council, comprising the Chancellor and the Vice-Chancellor (*ex officio*), twenty-four members elected by a

Convocation of Electors, four members elected by the undergraduates and five members of State Parliament. The principal advisory committees of the Council are the Education Committee (to which, and through which, all faculties and other academic bodies report, either directly or indirectly through the Executive Committee) and the Finance Committee each of which is appointed by the Council. There is also the usual university structure of faculties, boards of studies and special committees to advise on particular aspects of the University's work.

In 1984 the University had 11 faculties: arts (12 departments); economics (2); architecture and planning; science (12); agricultural science (8); engineering (4); medicine (9); law; mathematical sciences (5); music, and dentistry. Higher degrees are provided in all faculties and post-graduate diploma courses are provided in applied psychology, psychotherapy, environmental studies, computer science, and education.

The period of study for undergraduate degree courses ranges from three years to six years (for medicine). As from 1974 all tuition fees and associated charges for degree and diploma courses were abolished. However, fees are still payable in respect of courses in the Continuing Education Department and for studies in the Elder Conservatorium of Music which do not form part of a degree course. All students are still required to pay a Union Fee comprising, for full-time students, an entrance fee of \$30 and an annual fee of \$182; the annual fee for part-time students is proportionately less.

In 1984 there were seventy-seven professors, 111 readers, 266 senior lecturers, 67 lecturers and 123 tutors. Teaching by part-time staff amounted to approximately 56 300 hours. Part-time staff were mainly engaged in large first-year science classes involving laboratory work and in the faculties of engineering, law, medicine and dentistry.

Details of student enrolments are given in the following table.

The University of Adelaide, Enrolments <sup>(a)</sup>

Course	1980	1981	1982	1983	1984
Higher degree candidates <sup>(b)</sup> .....	1 092	1 106	1 161	1 141	1 163
Undergraduate, diploma, certificate and miscellaneous students:					
Agricultural Science .....	217	226	199	183	170
Architecture .....	208	218	251	262	217
Arts .....	2 194	2 234	2 230	2 342	2 378
Dentistry .....	262	224	195	186	159
Economics .....	809	843	815	795	767
Engineering .....	604	641	645	675	655
Law .....	670	724	756	771	745
Mathematical Sciences .....	539	566	593	593	612
Medicine .....	719	711	702	670	674
Music .....	152	164	177	181	171
Science .....	995	1 013	1 054	1 057	1 095
Environmental Studies .....	—	1	6	—	16
Miscellaneous (SAIT) <sup>(c)</sup> .....	157	154	152	137	125
Elder Conservatorium <sup>(d)</sup> .....	207	205	194	187	182
Visiting students <sup>(e)</sup> .....	209	226	180	147	175
Total .....	9 034	9 256	9 310	9 327	9 304

(a) Each student is counted once only in the category appropriate to their principal course.

(b) Includes Master's qualifying candidates.

(c) Students enrolled in subjects as part of a diploma course at the South Australian Institute of Technology.

(d) Students not also enrolled for degree or diploma subjects.

(e) Students enrolled at another university, who may subsequently qualify for a degree of that other university, but who are undertaking part of their degree work at the University of Adelaide.

From its inception until the end of 1984 the University had conferred 40 603 degrees and 10 102 diplomas by examination. There were 1 653 degrees conferred and 187 diplomas awarded in 1984.

Unique features of the University's work include: extensive research conducted by the University's Australian Centre for Gene Technology (one of the ten Centres of Excellence throughout Australia); studies in Aboriginal music conducted by the Centre for Aboriginal Studies in Music; Antarctic research undertaken by the Mawson Institute for Antarctic Research; post-graduate research into women's studies co-ordinated by the Centre for Women's Studies; arid zone research undertaken both at the University and the Middleback Field Centre; study and research of Asian politics, history and culture by the Centre for Asian Studies; and further education programs conducted through the University's radio station 5UV and the Office of Continuing Education.

As a result of a review of the University's Department of Continuing Education completed in 1982, a Committee and an Office of Continuing Education were created in 1983 to provide continuing education. Total enrolments for all activities of the Office of Continuing Education in 1984 were 1 655.

In 1972 the University established an educational radio station, Radio University 5UV, at the initiative of the former Department of Continuing Education and with a donation of \$100 000 from the late Mr K. G. Stirling. During 128 hours of broadcasting each week, 5UV transmits educational programs, including current affairs, science, women's issues; other programs include specialist music, magazine programs and a daily breakfast program, to the greater Adelaide metropolitan area.

The University's Theatre Guild, founded in 1938, was granted formal recognition as a society associated with the University in 1962, and in 1972 it was given administrative facilities within the University and its President recognised as a University Officer.

Membership of the Guild is open to graduates, undergraduates, and to the general public. All members have full voting rights at any general meeting of the Guild including the election of seven of the thirteen members of the Board of Management.

#### *Waite Agricultural Research Institute*

The Waite Agricultural Research Institute was established as a part of the University in 1924, and is located on a separate campus at Urrbrae. In 1927 it took on teaching responsibilities in addition to its research function.

There are seven departments covering the full range of the agricultural sciences (agricultural biochemistry, agronomy, animal sciences, entomology, plant pathology, plant physiology and soil science) plus a biometry section.

The second and final years of the University's Agricultural Science degree are taught at the Institute, involving about 100 undergraduates.

About 120 post-graduate students are undertaking Master's or Doctor of Philosophy studies at the Institute. In recent years post-graduate students have been accepted from more than thirty countries, with half the current number coming from overseas.

#### *The Barr Smith Library*

The central library of the University is named the Barr Smith Library in honour of its original benefactor, Robert Barr Smith, and his son, Tom Elder Barr Smith. During his life Robert Barr Smith provided funds for the purchase of books, and members of his family gave the University a substantial donation in 1920 to his memory. Tom Elder Barr Smith provided the first part of the present building in 1930 at a cost of nearly \$70 000.

In addition to the central library there are branch libraries for law and medicine and a separate library at the Waite Agricultural Research Institute. Borrowing facilities are available to University staff and students, and to graduates of approved institutions.

Holdings at the end of 1984 were approximately: central library 1 150 000 volumes; law library 83 000; and the Waite Agricultural Research Institute library 42 000 volumes; making total holdings equivalent to 1 275 000 volumes, including items in microform equivalent to 140 000 volumes.

During 1984 the library issued 325 000 extramural loans to students, staff and graduates; 30 600 to other libraries in South Australia; and 6 400 to libraries in other States and countries. It received 3 900 loans from other libraries. Accessions totalled 44 000 volumes, including items in microform equivalent to 7 480 volumes; while withdrawals numbered 700 volumes. Serial titles regularly received numbered 18 495.

### *Elder Conservatorium of Music*

The University's Elder Conservatorium of Music established in 1897 provides full degree courses in practical studies, musicology and composition, and instruction in the various branches of musical performance for part-time students.

In 1984 there were 169 students proceeding to the degrees of Bachelor of Music and Bachelor of Music (Performance), including Honours students and thirty-eight students proceeding to higher degrees. In addition 182 students were taking single subject practical studies.

### *Finance*

Details of income and expenditure for the period 1980 to 1983 are shown in the following table.

**The University of Adelaide, Finance <sup>(a)</sup>**

Particulars	1980	1981	1982	1983
	\$'000			
Income for capital purposes:				
Commonwealth Government .....	2 695	2 779	3 370	3 420
Income for other purposes:				
Commonwealth Government .....	48 581	54 034	62 021	63 875
State Government .....	587	655	681	649
Student fees .....	177	166	136	146
Other .....	3 199	4 020	5 414	5 075
Total income .....	55 239	61 654	71 622	73 165
Expenditure:				
Teaching and research .....	40 175	45 101	50 500	51 508
Administration .....	3 401	3 926	4 611	4 364
Libraries .....	3 593	4 013	4 868	4 887
Buildings, premises, grounds .....	3 746	4 134	5 014	5 678
Other .....	2 246	2 632	6 278	7 213
Total expenditure .....	53 161	59 806	71 271	73 650

(a) Includes Waite Agricultural Research Institute.

### *Residential Colleges*

The five residential colleges are independent bodies affiliated with the University. Three of the colleges for undergraduates were founded by churches but impose no denominational restrictions on admission; the fourth undergraduate college and the college for post-graduate students have no denominational affiliation. All are situated in North Adelaide within easy walking distance of the University.

Their names, church affiliations, years of founding and residential capacities are:

St Mark's .....	Anglican Church of Australia .....	1925	155 students, 15 tutors;
St Ann's .....	Non-denominational .....	1947	135 students, 8 tutors;
Aquinas .....	Catholic .....	1948	112 students, 5 tutors;
Lincoln .....	Uniting Church .....	1952	173 students, 10 tutors;
Kathleen Lumley ...	Non-denominational (post-graduate) .....	1968	60 students.

All colleges make their facilities available to both men and women.

### *Flinders University*

Initially planned as an extension of the University of Adelaide, on a site eleven kilometres from the centre of Adelaide, 'The Flinders University of South Australia' was given full autonomous existence by the South Australian Government in 1965.

Under the Flinders University of South Australia Act, the whole management of the University is placed in the hands of a council with powers to make statutes and regulations subject to the approval of Convocation which comprises the graduates of the University, graduates of other universities who have been awarded a diploma of the University, and full-time members of the staff.

The Council comprises thirty-one members: the Chancellor; the Vice-Chancellor; the President of the Students Association; five members of the Parliament of South Australia; three members appointed by the Governor; eight members of the academic staff elected by the academic staff; one member of the ancillary staff elected by the ancillary staff; four persons elected by Convocation; one post-graduate student elected by the post-graduate students; three undergraduate students elected by the undergraduate students; and not more than three other members co-opted by the Council.

A more detailed history of the Flinders University was included on pages 163-8 of the *South Australian Year Book* 1967.

### *Academic Organisation*

The academic organisation of the University is based on 'Schools' instead of faculties or departments. The School is the basic academic and administrative unit and one of the academic staff of each school is appointed to act as the Chairman of the School for a period of three years.

At present there are eight schools: humanities; social sciences; mathematical sciences; physical sciences; biological sciences; medicine; earth sciences; and education. In 1980 the University established a Board of Studies in Theology.

At 1 May 1984, the full-time staff consisted of: 367 academic, 297 technical and 94 other staff employed in the schools; 21 professional and 50 other staff in the library; 7 in the computing centre; 94 administrative and clerical staff in the registry; 65 caretaking, grounds and maintenance staff and 11 staff in the student services area.

### *Enrolments*

Details of student enrolments are given in the following table.



## The Flinders University of South Australia, Enrolments

Course	1981	1982	1983	1984
Undergraduate bachelor degrees:				
Arts .....	1 421	1 433	1 516	1 597
Science .....	508	526	671	716
Economics .....	356	335	359	434
Education .....	30	27	31	39
Physical Education .....	71	67	57	39
Medicine .....	343	332	319	314
Social Work .....	11	11	9	5
Theology .....	75	109	143	157
Post-graduate bachelor and diploma:				
Bachelor Social Administration .....	90	91	95	85
Bachelor Special Education .....	37	27	30	30
Diploma Education .....	45	58	56	79
Diploma Education (Primary) .....	3	—	—	—
Diploma Social Sciences .....	34	20	26	31
Diploma Applied Psychology .....	40	32	21	26
Diploma Community Child Health(a) .....	—	4	4	7
Diploma Nutrition and Dietetics .....	11	13	12	14
Diploma Accounting .....	100	103	105	103
Diploma Urban and Social Planning .....	6	3	3	—
Diploma of Humanities(b) .....	—	—	4	2
Higher degrees (including master qualifying) ...	416	429	416	409
Miscellaneous .....	163	159	219	373
Total .....	3 760	3 779	4 096	4 460

(a) Commenced in 1982. (b) Commenced in 1983.

The University offers tuition in courses leading up to eight different Bachelor degrees and ten Master degrees. In addition the University confers Doctor of Philosophy, Doctor of Letters and Doctor of Science degrees. Post-graduate diplomas are offered in eight different areas.

### The Library

The acquisition of books for the Library commenced in 1963 when the first Library staff were appointed. By the time teaching began in 1966 a collection of some 60 000 volumes had been assembled. At the end of 1984 the collection totalled 585 000 volumes and approximately 30 000 volumes are being added each year; 7 000 periodicals are currently received. Emphasis is placed on the acquisition of material to support the current teaching and research programs of the University. Loans to staff and students during 1984 exceeded 100 000. The Medical Library, situated in the Flinders Medical Centre, is a branch of the main Library and holds about 39 000 volumes on medicine and allied subjects for University and Medical Centre users.

### Research Activities

The Flinders Institute for Atmospheric and Marine Sciences was established by the Council to further the University's interest in physical and environmental aspects of the air and the sea.

The Institute ensures that the University's academic and technological capabilities in atmospheric and marine sciences are made known to such government instrumentalities

and private sectors of industry as may make use of them to the mutual benefit of both the outside group and the University. Tidal and specialised meteorological data libraries, instrumental facilities and field stations on the Coorong and Cape du Couedic as well as a series of publications are maintained.

The National Institute of Labour Studies in the School of Social Sciences encourages graduate study, research and publication in the areas of industrial relations, labour economics, industrial psychology and sociology, and labour history. It publishes a quarterly review of labour events, *The Australian Bulletin of Labour*, and a working paper series.

The Centre for Research in the New Literatures in English (CRNLE) aims to promote research in its field by providing a specialist library collection; developing and supervising post-graduate research programs; facilitating more effective teaching of under-graduate courses; and sponsoring research investigations that involve cultural and social questions and are based on cross-cultural, comparative and inter-disciplinary approaches to the study of the literatures and societies concerned.

The Institute for Atomic Studies was formed in 1976 to act as a focus for the interaction of scientists and graduate students and for the dissemination of reports of research involving the structure and interaction of microscopic quantum systems. Present members, within the disciplines of physics and chemistry, are pursuing fundamental research in the fields of experimental and theoretical atomic collision physics, low and intermediate energy nuclear theory, quantum field theory, statistical physics, electron transport phenomena and quantum and surface chemistry.

In June 1976, the Council of the University approved the formation of the Institute for Australasian Geodynamics, to provide a focus for geodynamic research within the School of Earth Sciences. It also aims to foster co-operative studies and facilitate the training of Asian and Australian researchers in the geodynamics of Australasia, including research co-ordination, publication of reports and the maintenance of an information data bank.

The Centre for Neuroscience was established to foster the interests in the neurosciences that existed within the Schools of Medicine, Biological Sciences and Social Sciences and in the Flinders Medical Centre. The Centre also acts as a Statewide resource for the neurosciences. At present there are thirty-nine members and eighteen associates.

The Cancer Research Unit was established in 1977 as a joint development between the School of Medicine and the School of Biological Sciences. Members of both Schools are investigating various aspects of cancer as their major research interest. Interests range from the theoretical (*e.g.*, DNA structure, control of cell proliferation) to the practical (*e.g.*, treatment).

The Unit was established not only to encourage collaborative research projects but also to facilitate the acquisition of major items of equipment which could not be justified by a single user.

The Centre for Development Studies is a multi-disciplinary centre whose objectives are (i) to encourage research on development, by providing a forum for inter-disciplinary discussion and collaboration, (ii) to provide the focal point for a graduate program in development studies and (iii) to provide an institutional framework that will facilitate the provision of consultancy and training services to agencies involved in development, and other community-oriented activities. The research activities of the Centre focus on a small number of problem areas which are considered to be directly relevant to the

development needs of Third World countries and for which there are already staff members with expertise.

### *University Hall*

The Flinders University's hall of residence was completed early in 1971. During the academic year it offers accommodation and meals for more than 200 students, mostly in single furnished study bedrooms. During University vacations the Hall is available for conferences organised by outside bodies.

### *Finance*

Details of income and expenditure for the period 1980 to 1983 are shown in the following table.

**The Flinders University of South Australia, Finance**

Particulars	1980	1981	1982	1983
	\$'000			
Income for capital purposes:				
Commonwealth Government .....	166	171	180	575
Income for other purposes:				
Commonwealth Government .....	23 271	27 180	29 584	31 787
State Government .....	213	431	354	452
Other .....	1 400	1 888	2 643	3 297
Total income .....	25 050	29 670	32 761	36 111
Expenditure:				
Teaching and research .....	17 427	20 601	22 889	23 959
Administration .....	2 995	3 233	3 519	3 840
Libraries .....	1 757	2 025	2 181	2 254
Buildings, premises, grounds .....	1 454	1 742	1 896	2 338
Other .....	1 616	1 837	2 370	2 809
Total expenditure .....	25 249	29 438	32 855	35 200

## COLLEGES OF ADVANCED EDUCATION

### **South Australian College of Advanced Education**

The South Australian College of Advanced Education (SACAE) was formed on 1 January 1982 by the merger of Hartley, Salisbury and Sturt Colleges of Advanced Education and Adelaide College of the Arts and Education. By virtue of this amalgamation, the College has a heritage extending back more than a century, to the earliest days of teacher training in Australia.

The College operates on five metropolitan sites located at Salisbury in the northern suburbs, Sturt to the south, Magill to the east, Underdale to the west, and at Kintore Avenue in the centre of Adelaide, where the College administration is based.

With more than 7 000 internal students, 2 000 external students, and 1 000 staff SACAE is the third largest college of advanced education in Australia.

The College is governed by a Council consisting of fourteen community members appointed by the Governor, the Principal, an elected senior staff member, six elected academic and general staff, and three elected students. To advise on the exercising of its powers, the Council has constituted three Standing Committees: an Academic Committee, a Finance Committee and a Staffing Committee. Standing Committees include

members from all sections of the College community and are advised by the various Faculty Boards on faculty matters.

The Principal is assisted in the management and administration of the College by three Directors (Academic, Services and Finance) and the Dean of each Faculty. Further assistance is provided by the Academic, Administrative, Finance and Staffing Secretariats.

The basic academic unit of the College is the Faculty and each Faculty is organised to provide for educational leadership in the College by senior academics. Within each Faculty there are academic Schools or Centres, each with its own identity, and servicing a range of course offerings as follows:

- the Faculty of Art, Design and Applied Science at Underdale comprising the South Australian School of Art, the School of Design, the School of Art and Design Education and the School of Applied Science;
- the Faculty of Business, Communication and Cultural Studies at Magill comprising the School of Business, the School of Music, the School of Languages, the School of Communication, the School of Human and Environmental Studies and the School of Cultural Studies;
- the Faculty of Education and Community Development at Salisbury comprising the School of Arts, the School of Education Studies, the School of Pure and Applied Sciences and the School of Social Science;
- the Faculty of Education and Family Studies at Magill comprising the De Lissa Institute of Early Childhood and Family Studies, the School of Studies in Education and the School of Learning and Teaching Studies;
- the Faculty of Education and Humanities at Underdale comprising the Aboriginal Studies and Teacher Education Centre, the Centre for Studies in Adult and Further Education, the School of Physical Education, the School of Advanced Studies in Education, the School of Studies in Education and the School of Humanities and Social Science; and
- the Faculty of Health Science and Education at Sturt comprising the School of Education Studies, the Centre for Special Programs and the Centre for Nursing Studies.

The College has the most diversified range of teacher education courses of any higher education institution in Australia, training teachers to work in pre-school settings, junior primary and primary schools, middle and secondary schools in a full range of secondary specialisations, and in technical and further education institutions. The College has diversified its educational offerings, and now provides both undergraduate and post-graduate courses in areas such as Aboriginal studies, dance, design, interpreting and translating, music, parks and wildlife management, community languages, nursing, recreation and journalism.

All courses offered are accredited to national standards under the supervision of the Tertiary Education Authority of South Australia, and with the participation of professional associations where relevant. Courses can be taken either full-time or part-time, with a majority of courses being available to external students, who are currently 23 per

cent of enrolments. There are sixteen Associate Diploma, fourteen Diploma, forty-six Degree and thirty-four Graduate Diploma courses. Admission to most courses is subject to selection based on academic merit, and course quotas. Applicants must have satisfactorily completed Year 12 or have met mature age entry requirements.

**South Australian College of Advanced Education:  
Students by Course Level and Field of Study, South Australia**

Particulars	1982	1983	1984
<b>Course level:</b>			
Graduate Diploma .....	1 559	1 607	1 925
Bachelor Degree .....	4 260	4 398	4 864
Diploma .....	3 391	2 920	2 922
Associate Diploma .....	1 032	1 139	1 269
Miscellaneous .....	369	269	154
<b>Total .....</b>	<b>10 611</b>	<b>10 333</b>	<b>11 134</b>
<b>Field of study:</b>			
Applied Science .....	107	139	188
Art and Design .....	695	732	807
Commerce and Business .....	459	583	772
Liberal Studies .....	1 071	1 142	1 300
Music .....	135	163	166
Para-medical .....	686	736	823
Teacher Education .....	7 089	6 569	6 920
Miscellaneous .....	369	269	158
<b>Total .....</b>	<b>10 611</b>	<b>10 333</b>	<b>11 134</b>

The College has established a Student and Community Services Unit which makes a practical contribution to the community by providing services through the College's community recreation centres, libraries, buildings and other facilities, including child care services.

SACAE has incorporated a consultancy group, SACCESS, and its close support of organisations such as the Institute for Fitness Research and Training, the South Australian Sports Institute, the Institute for Developmental Disabilities and the Centre for Settlement Studies, make the College's intellectual and physical resources available to industry, commerce and the general community.

### **Roseworthy Agricultural College**

Roseworthy Agricultural College, situated approximately fifty kilometres north of Adelaide, was established in 1883 as the first agricultural college in Australia. Since that time the College has made significant contributions to agricultural education and farm production in Australia.

In March 1974 the College became a college of advanced education governed by a Council appointed under the Roseworthy Agricultural College Act, 1973-1979. The Council includes elected representatives of staff and students.

Courses at several levels of academic and practical achievements have been developed to meet the increasing demand for tertiary education from students with a wide range of capacities, interests and vocational needs in the three general areas of agriculture, wine and natural resources management.

The College's teaching staff in 1984 comprised thirty-six lecturers; five tutors and demonstrators; six farm and enterprise managers; two plant breeders, and one research associate.

#### **Roseworthy Agricultural College: Courses Offered in 1984**

Course	Total enrolments
<b>Agriculture:</b>	
Bachelor of Applied Science in Agriculture, 3 year course .....	102
Associate Diploma in Agriculture;	
Agricultural Production, 2 year course .....	34
Farm Management, 2 year course .....	38
Horse Husbandry and Management, 2 year course .....	56
Graduate Diploma in Agriculture, 1 year course .....	31
<b>Natural Resources:</b>	
Bachelor of Applied Science in Natural Resources, 3 year course ...	78
Graduate Diploma in Natural Resources, 1 year course .....	9
<b>Oenology:</b>	
Bachelor of Applied Science in Oenology, 3 year course .....	70
Associate Diploma in Wine Marketing, 2 year course .....	56
Graduate Diploma in Wine, 1 year course .....	26

A special article on Roseworthy Agricultural College was included on pages 216-9 of the *South Australian Year Book* 1983.

#### **South Australian Institute of Technology**

The South Australian Institute of Technology, which adopted its present name in 1960, was established in 1889 as the South Australian School of Mines and Industries. The South Australian Institute of Technology Act was amended in 1972 to empower the Institute to grant its own degrees.

In addition to its campuses at North Terrace, Adelaide, and The Levels (approximately thirteen kilometres north of the city), the Institute operates a campus at Whyalla teaching at both professional and semi-professional levels. In 1984 the Institute taught approximately 1 100 subjects.

A wide range of courses and subjects to various levels is offered. All twenty-four of the professional courses presented by the Institute have been accredited by the Australian Council on Awards in Advanced Education for the award of Institute degrees or diplomas. The Institute offers a Masters' degree in Applied Science (Pharmacy), a Master of Business Administration degree and a Masters' degree (Research) which is available in seventeen areas. There are also twenty-eight accredited graduate diploma courses including a General Graduate Diploma offering programs in Applied Science, Social Science and Engineering.

The following table shows students by field of study and course level.

**South Australian Institute of Technology: Students by Field of Study and Course Level 1984**

Field of Study	Master Degree	Graduate Diploma	Bachelor Degree	Diploma	Associate Diploma	Total
Applied Science .....	21	137	418	—	171	747
Building, Surveying and Architecture .....	11	14	378	—	238	641
Commerce and Business Engineering and Technology .....	92	284	1 217	—	368	1 961
Liberal Studies .....	21	86	897	—	354	1 358
Para-medical .....	14	343	486	—	381	1 224
	20	25	493	50	124	712
Total .....	179	889	3 889	50	1 636	6 643

For a number of years the Institute has offered courses which lead, by various periods of part-time study, to a level of qualification below that of the full professional. These courses provide for those employed in the broad area between the tradesman and the professional. In addition to seven Technician Certificate courses, the Institute also offers thirteen Associate Diploma courses which may be entered after completion of a Technician Certificate or twelve years of schooling.

The Institute's academic staff in 1984 comprised 368 full-time members and a further 721 employed part-time.

The Library is situated at each of the three campuses of the Institute. The total holding is about 228 000 volumes with some 2 700 periodical titles being received each year. Emphasis is placed on the acquisition of material in the applied sciences, technology and social sciences to support the Institute's teaching program. Collections of audio-visual materials including films, microforms, maps, prints, records and slides are being developed.

Details of income and expenditure for the period 1980 to 1983 are shown in the following table.

**South Australian Institute of Technology, Finance**

Particulars	1980	1981	1982	1983
	\$'000			
Income for capital purposes:				
Commonwealth Government .....	854	1 003	1 215	1 599
Income for other purposes:				
Commonwealth Government .....	17 587	20 436	22 511	24 373
Other .....	313	494	968	725
Total income .....	18 754	21 933	24 694	26 697
Expenditure:				
Capital (land, buildings, plant, furniture and equipment) .....	799	1 079	1 215	1 800
Revenue .....	18 237	20 288	24 312	25 726
Total expenditure .....	19 036	21 367	25 527	27 526

### **Tertiary Education Assistance**

In 1974 the Commonwealth Government abolished tuition fees at universities, colleges of advanced education, and technical colleges and introduced the Tertiary Education Assistance Scheme.

The Tertiary Education Assistance Scheme is intended to assist students in approved courses at universities, colleges of advanced education, technical colleges and certain other approved tertiary institutions in Australia. Assistance under the scheme may include payment of living allowance, incidentals allowance, allowance for a dependent's spouse and/or child, and fares allowance. All benefits are subject to an income test and a student must be eligible for living allowance in order to receive any of the other benefits. The maximum amount of living allowance payable is \$3 581 a year for independent students. Students eligible to receive living allowance at the away from home rate and students living at home may receive up to \$3 308 or \$2 048 a year respectively. In addition, each student receiving the 'at home' or 'away from home' rate may receive up to \$273 in lieu of family allowance paid in respect of the dependent student by the Department of Social Security.

Aboriginal Study Grants are available for students of Aboriginal and Torres Strait Islands descent who wish to study further after leaving school. Benefits include a living allowance, a textbook and equipment allowance and an establishment and clothing allowance.

Awards are also available for post-graduate study either in research or in course work. Assistance is by means of taxable allowances paid to award holders. The allowances payable consist of a living allowance, an incidentals allowance and under certain circumstances special allowances in respect of dependants, cost of travel, cost in setting up residence, and a contribution to costs associated with the production of a thesis. The living allowance payable to an award holder with no dependants is \$7 616 a year.

## **OTHER EDUCATION**

### **Department of Technical and Further Education**

The Department of Technical and Further Education (TAFE) is responsible for a wide range of post-secondary educational activities conducted by community colleges and colleges of further education in all areas of the State.

Much of the educational development is directed towards an improvement in vocational competence. This includes the provision of courses for the employment sectors of industry, commerce and government. These courses are provided at many levels from basic trade (apprentice) to post-trade certificate, technician, para-professional and to some extent diploma level. Also associated with this vocational orientation are preparatory or general education courses.

The Department also caters for continuing education for people of all ages by providing a wide variety of general, academic, craft, art, cultural, personal development and general interest courses. The Department offers more than 400 multi-subject courses and 4 000 subjects which can be taken as part of a course or individually for over 145 000 students throughout South Australia.

In 1983 the staff in technical and further education colleges throughout the State was 1 520 full-time teachers representing 1438 Effective Full Time Equivalents, 4064 part-time teachers, 706 ancillary staff and 186 head office staff.



**Further Education: Distribution of Educational Activities, South Australia**

TAFE Stream	Actual Student Hours			
	1982		1983	
	No.	Per cent	No.	Per cent
Degree and diploma .....	15 386	0.2	1 201	0.0
Technician, certificate and post-trade ...	3 441 847	31.8	2 229 818	20.4
Basic trade or apprenticeship .....	2 426 246	22.4	2 221 171	20.4
All other skilled trade and vocational ...	1 479 738	13.7	2 663 237	24.4
Preparatory and general education .....	2 397 618	22.2	2 826 760	25.9
General interest, enrichment and improvement .....	1 049 524	9.7	963 754	8.8
<b>Total .....</b>	<b>10 810 359</b>	<b>100.0</b>	<b>10 905 941</b>	<b>100.0</b>

The following table shows the number of subjects and course enrolments for the years 1981 to 1983.

**Further Education: Enrolments, South Australia**

TAFE Stream	1981	1982	1983
<b>SUBJECT ENROLMENTS</b>			
Degree and diploma .....	552	415	121
Technician, certificate and post-trade .....	64 323	64 917	45 020
Basic trade or apprenticeship .....	22 342	23 561	23 817
All other skilled trade and vocational .....	29 336	34 657	60 161
Preparatory and general education .....	45 687	51 192	51 801
General interest, enrichment and improvement .....	56 430	49 661	48 578
<b>Total .....</b>	<b>218 670</b>	<b>224 403</b>	<b>229 498</b>
<b>COURSE ENROLMENTS(a)</b>			
Degree and diploma .....	356	236	121
Technician, certificate and post-trade .....	33 695	34 587	26 054
Basic trade or apprenticeship .....	9 448	9 703	10 602
All other skilled trade and vocational .....	25 405	27 619	47 362
Preparatory and general education .....	38 152	46 205	45 290
General interest, enrichment and improvement .....	56 384	49 657	48 540
<b>Total .....</b>	<b>163 440</b>	<b>168 007</b>	<b>177 969</b>

(a) There is no reconciliation for multi-stream enrolments.

The Department also offers a wide range of practical courses under the Participation and Equity and other Transition Programs, including:

The Educational Program for Unemployed Youth which is for 15-24 year old unemployed persons whose lack of educational and personal development makes it difficult for them to get or hold a job or cope with vocational training. The course offers remedial training in literacy and numeracy, as well as an opportunity for improving employment related social skills;

Foundation Courses aimed at giving students the opportunity to study the nature

and entry requirements of a wide range of occupations across the major industrial groupings. Students then match their own developing skills and interests with these occupations in order to select a broad industry grouping of occupations for further study;

Vocational Preparation courses designed to prepare young people for labour market requirements in particular industries or geographical locations. They are normally shorter courses, and are taught at semi-skilled levels;

Pre-vocational (Trade Based) courses designed for young people who wish to become trades people. Instruction is at the apprenticeship level and a student gains educational credit to Stage I in the relevant trades upon successful completion;

Pre-vocational (Non-Trade) courses designed for young people who have made a choice to enter a particular group of occupations other than trade based occupations. These offer credit towards Vocational Certificate courses.

Other TAFE courses which are full-time, up to one year in length and vocationally oriented may also be approved for the longer term unemployed.

The Department provides full-time, part-time or correspondence studies in a large number of courses. Special arrangements are made for country apprentices. Correspondence students are also able to attend community and further education colleges for supervised study.

An integrated training approach to vocational education continues to develop in many colleges. The more traditional divisions of technical courses into theory, drawing and practical plus on the job experience are being replaced by integrated course work on a project basis.

Many colleges produce and use a wide range of audio-visual learning materials. The Educational Multi-Media and Print Production branch of the Open College of Further Education, provides a State-wide service in the production of many of these materials including a number of video programs.

In college library/resource centres there are now holdings of books, periodicals, sound and video tapes, slides and transparencies exceeding 250 000 items. The appointment of lecturers (resource centre) in many colleges enhances the use of the resource centre as an important part of the learning process.

Community colleges and colleges of further education function as semi-autonomous units in a Departmental network.

The Operations Division is responsible for translating established policies into operational programs particularly in the areas of curriculum, staff training and development. The Resources Division services all areas of the Department with emphasis upon research, building, educational resources, administration, finance and clerical services.

The major areas of change and emphasis in further education include:

- the continuing development of the community college, both conceptually and physically;
- the further development of general studies in colleges which were traditionally technical, with the emphasis on preparatory, remedial and bridging courses;
- the development of educational programs to aid young people in the transition from school to work;
- the adoption of the 'open college' approach to education so as to reach a broader sample of the South Australian population at the post-secondary level;
- greater use of media in further education in conjunction with the planned development of library/resource centres;

- co-operation and co-ordination in curriculum matters with other post-secondary institutions, and increased community involvement in educational planning.

### **Workers' Educational Association of South Australia**

The Workers' Educational Association of South Australia Incorporated (WEA) was established in 1913. Originally patterned on the English WEA, it is a voluntary adult education organisation which works in close co-operation with other adult education organisations and the trade union movement.

Activities include a comprehensive day and evening class program, postal courses for trade unionists throughout Australia and trade union education classes. It offers courses at its own adult education centre in the City, the University of Adelaide, the Flinders University of South Australia, the South Australian Institute of Technology, many colleges of advanced education, high schools and other public institutions.

In 1984 the WEA organised 1 400 classes with a total enrolment of 28 500 students and a further nineteen postal courses with an enrolment of 2 600. The WEA has become increasingly involved in helping a range of community organisations to conduct their own courses and in training members of such groups as adult education tutors. Several twelve week self-employment courses have been conducted for young unemployed persons, on behalf of the Commonwealth and South Australian Governments.

### **Migrant Education**

Most courses in the Adult Migrant Education Program in South Australia are conducted by the State Adult Migrant Education Service and are funded by the Commonwealth Department of Immigration and Ethnic Affairs.

The Program provides the opportunity to learn English for both newly arrived migrants and refugees and for longer term residents. In addition, information on living in Australia is provided to new arrivals in their own language wherever possible.

A variety of learning arrangements is provided to meet individual needs, including full and part-time day and evening classes, individual learning centres, where students can study at times to suit themselves, courses in the workplace, the Home Tutor Scheme whereby volunteer tutors provide tuition in the migrants own home, and correspondence courses.

Following the recommendation of the Australian Institute of Multicultural Affairs in its 1982 Review, the Commonwealth now places a major emphasis on the first 'on-arrival' phase, with an estimated Australia-wide enrolment of 21 000 students in 1982-83.

### **Industrial and Commercial Training Commission**

Legislation governing vocational training in South Australia is contained in the Industrial and Commercial Training Act, 1981 which is administered by the Industrial and Commercial Training Commission. The Commission consists of a full-time Chairman and Deputy Chairman together with eight part-time members, three representing the interests of employers, three the interests of employees, together with a nominee of the Director of the Department of Labour and of the Director-General of Technical and Further Education. The Commission's broad function is to evaluate training already being provided; determine training programs for trades and other vocations; develop trainee schemes and pre-vocation courses; examine the training needs of special groups; co-ordinate training resources; organise and supervise contracts of training; promote training programs; encourage skills centres for off-the-job training, and advise the Minister of Labour on training matters.

To assist the Commission in its tasks, Training Advisory Committees are being established to cover the various sectors of industry and commerce. The establishment of advisory committees on an industry rather than a vocational basis is seen as an important

innovation. Where considered appropriate by an advisory committee, sub-committees may be appointed to advise on the training requirements of particular vocations. Efforts are being made to integrate the activities of the advisory committees when developed with those of the various Industry Training Committees established under the auspices of the National Training Council. Integration is also intended with relevant committees of the Department of Technical and Further Education.

#### *Trade Training*

A major part of the Training Commission's work concerns the administration and supervision of apprenticeship matters.

#### **Number of New Apprenticeships Commenced: Trade Groups, South Australia**

Trade Group	1980-81	1981-82	1982-83	1983-84 <sup>p</sup>
Metal .....	1 467	1 250	740	993
Electrical .....	432	379	262	299
Building .....	425	245	175	363
Furniture .....	133	114	61	119
Printing .....	78	44	29	68
Vehicle .....	85	109	101	158
Ship and boat-building .....	5	8	4	9
Clothing .....	—	—	1	2
Food .....	200	198	131	230
Hairdressing .....	235	266	249	424
Other .....	104	107	90	87
<b>Total .....</b>	<b>3 164</b>	<b>2 720</b>	<b>1 843</b>	<b>2 752</b>

Employers wishing to train people in vocations prescribed by the Act must be approved by the Commission. Under the Act an employer cannot undertake to train a person (whether as an apprentice or otherwise) in a declared vocation except in pursuance of a contract of training. Terms of apprenticeship are generally of four years duration, and include an initial probationary period of three months. Authority rests with the Commission to investigate and deal with apprenticeship matters including transfer, suspension or cancellation of indentures. A Disciplinary Committee has responsibility for determining matters where there is a breach of provisions of an indenture or of the Act.

The following table shows the number of new apprenticeships commenced, indentures completed, indentures cancelled, and apprentices employed at 30 June for the years 1980-81 to 1983-84.

#### **Apprenticeships, South Australia**

Particulars	Unit	1980-81	1981-82	1982-83	1983-84 <sup>p</sup>
New apprenticeships commenced ...	No.	3 164	2 720	1 843	2 752
Indentures completed .....	No.	3 138	2 582	2 408	2 553
Indentures cancelled .....	No.	301	438	410	310
Apprentices employed .....	No.	11 048	10 622	9 647	9 536

Although the provision of technical education for apprentices is the responsibility of the Minister of Education, the Commission has the authority to approve courses of training and instruction for apprentices or other trainees.

With few exceptions every apprentice must attend a College of Technical and Further Education to complete a course of instruction, generally during the first three years of his indenture term.

### *Group Apprenticeship Schemes*

Four group schemes are now established in South Australia, with the Master Builders Association of SA Inc., the Metal Industries Association of SA, the SA Automobile Chamber of Commerce and the Australian Hotels Association. These schemes attract financial assistance from the Commonwealth and State Governments. Under the schemes a number of employers whose individual business operation may not be able to provide the full range of training required for an apprenticeship, can collectively do so. The organisations act as the employer in the contracts of training, arranging for the apprentices' on-the-job experience with a number of participating employers.

### *Pre-vocational Training*

In 1982 State Cabinet determined that courses of pre-vocational training (*i.e.* training designed as preparation for training in a trade or other declared vocation) should become a permanent feature of the South Australian education and training system. Courses made available by the Department of Technical and Further Education, and approved by the Training Commission, provide persons with immediately usable knowledge and skills which may enhance their employment prospects in a range of skill related occupations. The Training Commission is of the view that within the next few years the normal means of entry into all vocations will be by way of full-time vocational education and training programs of this type.

Up to and including 1983 the courses were generally of twenty weeks duration and of an interim pilot nature. In 1984 a range of new courses were introduced, mainly of thirty-eight weeks duration, which include a substantial practical component. This development of courses is continuing in 1985.

#### **Pre-vocational Courses (Trade Based)**

Particulars	Unit	1982	1983	1984
Range of courses .....	No.	7	17	21
Trades covered .....	No.	27	42	51
Student places .....	No.	660	1 204	1 183

Educational credit is made available for students who complete an approved or endorsed course of pre-vocational training to the required standard, and indenture term credit may be provided to those in this category who subsequently gain an apprenticeship in a trade area relevant to the course undertaken.

### **Australian Trade Union Training Authority**

The Trade Union Training Authority (TUTA) was established by the Federal Government in 1975. It is a statutory Authority under the Australian Trade Union Authority Act.

TUTA's functions under that Act are as follows:

- (i) to plan and develop and to undertake, programs of trade union training in Australia;
- (ii) to co-ordinate trade union training in Australia;
- (iii) to promote the provisions and undertaking of trade union training; and

- (iv) to keep the trade union training that is being provided in Australia under constant review and to re-assess and re-evaluate that training in the light of experience.

To this end TUTA has established training centres in all six State capital cities together with two regional centres in Newcastle and Canberra and the Clyde Cameron College. The College is a residential training Centre located in Albury/Wodonga.

The South Australian Centre conducts more than seventy courses a year. Approximately 10,000 trade unionists have been trained by the Centre since 1975. The courses deal with such subjects as the rights and responsibilities of the shop steward, grievance handling, workplace communications including meeting procedures, workers compensation, occupational health and safety, equal opportunities in the workplace, industrial advocacy skills, the Prices and Incomes Accord and many others. The Centre can also provide courses and seminars for specific industries and unions on the request of the unions concerned. Most courses provided by the Centre are of three days duration.

### **Department of Labour**

The Department of Labour through its Industrial Safety and Regional Services Division, provides staff to undertake training supervisory duties throughout the State for the Industrial and Commercial Training Commission. These officers—Training Supervisors—advise on training programs, report on the suitability of on-the-job training facilities and standards, and supervise contracts of training.

Staff of the Training Development Branch of the Department of Labour analyse and determine policies relating to training manpower and human resource management. Activities include the development of training strategies and initiatives. The Branch also provides a comprehensive range of services to a number of policy-making and advisory bodies reporting to State and Commonwealth Governments and to industry organisations, companies and employee associations. In addition, the Branch delivers executive services to the Industrial and Commercial Training Commission.

### **Department of Employment and Industrial Relations (DEIR)**

The Commonwealth Government has a number of functionally separate schemes related to employment training. These schemes are designed to meet the needs of different groups and are administered by DEIR as components of the Department's Labour Force Programs.

#### *Trade Training Schemes*

The Commonwealth Rebate for Apprentice Full-time Training Program (CRAFT) compensates employers through tax-exempt rebates for the costs of releasing apprentices to take basic trade courses in technical education or to attend approved full-time, off-the-job training courses during the first year of apprenticeship. Rebates vary between \$21.90 and \$42.80 per day determined by the trade concerned, year of apprenticeship and stage of technical education.

Employers can also qualify for a Pre-vocational Graduate Employment Rebate should they engage as an apprentice a graduate of a trade based pre-vocational training course who has qualified in at least one stage of the relevant basic trade course and is granted at least six months credit against the indenture term.

Weekly living-away-from-home allowances for first and second year apprentices of \$34.40 and \$14.60 respectively are provided where an apprentice is compelled to live away from home in order to obtain or to remain in apprenticeship.

The Group One-Year Apprentice Scheme provides for apprentices indentured to

private sector employers to receive full-time off-the-job training in Commonwealth or State Government Departments or instrumentalities for the whole of their first year of apprenticeship. The costs of this training (including the apprentices wages) are met in full by the Commonwealth. At the end of the first year of training the apprentices return to the indenturing employer for the remainder of the apprenticeship term.

The Special Assistance Program is aimed at reducing wastage among apprentices who become out-of-trade by subsidising employers to either retain their apprentices during economic difficulty or engage out-of-trade apprentices, or by subsidising apprentices to complete basic trade training while unemployed.

The Department of Employment and Industrial Relations also administers the Group Apprenticeship Support Program established to assist in the funding of group apprenticeship schemes.

### *Skills Training Program*

Assistance for skills training is provided by the Commonwealth through programs for employers and individuals. The purpose of this assistance is to help industry meet its requirements for skilled labour and to support individuals, who, without training or re-training, would be at a disadvantage in obtaining stable and rewarding employment. In achieving these ends the Commonwealth has adopted a varied approach.

The Commonwealth Skills in Demand Program has been specifically developed to assist where industry and Government agree that there is a shortage of skilled labour in a particular locality or industry, and/or a need is established for new training arrangements.

General training assistance for individuals with previous labour market experience is provided through training allowances while undertaking formal courses and subsidies to employers to provide on-the-job training.

A training allowance is available to eligible unemployed jobseekers to provide income support while undertaking formal training in occupations where the Department believes there will be demand at the completion of training.

Compulsory fees are paid and trainees may receive a book and equipment allowance. Trainees may also be eligible for a living away from home/moving allowance or other benefits depending on their circumstances.

Employers may be paid a subsidy to provide training for an eligible person referred by the Commonwealth Employment Service.

The Labour Adjustment Training Arrangement program assists workers made redundant in designated industries and areas to undertake skills training.

### *Industry Training Services*

As part of its responsibility in implementing an effective national manpower policy, the Department of Employment and Industrial Relations has established the Trainer Training Service to improve the extent and quality of training practices throughout industry and commerce. Industry Training Services provides an advisory service aimed at the promotion of additional and better training in, and for, industry and commerce. The Trainer Training Service aims to promote training as a concept in industry and commerce, and to improve training standards.

Members of the Industry Training Network Section represent the Commonwealth on the various Industry Training Committees (ITCs) established as voluntary bodies under the aegis of the tripartite National Training Council (NTC), the Commonwealth's labour force training advisory body. The functions of ITCs are two fold; to promote and develop systematic training in their industry and to provide policy advice to the National Training Council and the Minister for Employment and Industrial Relations on labour

force and training needs, and funding required to meet the needs. ITCs are supported by funds provided by industry itself as well as the Commonwealth Government.

### *Youth Training Schemes*

Assistance for youth training is provided through programs to assist the young unemployed to obtain stable and worthwhile employment. The schemes provide assistance for the transition from school to work, pre-apprenticeship support and training and work experience for unemployed youth.

In 1984, the Participation and Equity Program replaced the School to Work Transition Program. PEP is a new Commonwealth initiative administered jointly by the Schools Commission and TAFEC and aims to encourage young people to participate in useful and fulfilling education and training activities in schools and TAFE. In conjunction with PEP, DEIR provides a Transition Allowance which aims to assist young people with restricted education and training options and poor employment prospects to undertake approved full-time vocationally oriented courses.

Students attending Commonwealth or State-funded Pre-apprenticeship Courses at TAFE institutions may opt for an allowance of \$20 per week when the Transition Allowance or assistance under the Tertiary Education Assistance Scheme is not available.

The Special Youth Employment Training Program (SYETP) is provided to employers by way of wage subsidies when the Commonwealth Employment Service assesses that a young person is in need of work experience in order to secure stable employment. A higher rate of subsidy is available for the longer-term unemployed.

For employers to qualify for the subsidy they must be prepared to provide full-time employment for seventeen or thirty-four weeks and pay at least the award wage for the job. Trainees may also be placed in Commonwealth departments and instrumentalities under SYETP.

### *Assistance for Long Term Unemployed Adults*

The Adult Wage Subsidy Scheme which was introduced in March 1983, aims to facilitate the re-integration of long-term unemployed adults into the work force.

Wage subsidies are payable to employers who take on eligible job-seekers and provide them with stable employment. Higher subsidies are paid in respect of older job-seekers with lengthy periods of unemployment in recognition of the greater difficulties these persons face in competing for jobs.

### *Special Training Program*

Formal training allowances are paid to eligible Aborigines undergoing formal training to obtain a specific employment qualification, or attending an approved preparatory employment course. Such courses include those offered by recognised educational institutions and others specially designed for Aborigines.

Employer subsidies are paid to employers who provide on-the-job training for Aborigines in specific occupations. Training programs depend upon the needs of the individual Aborigines. These subsidies apply to both the public and private sector of the economy.

A training allowance is available to disabled people who undertake formal training for an occupation which has been assessed as being in demand, or who are employed in work preparation projects for disabled people assessed as having the potential to gain open employment.



A subsidy is available to employers who employ and train a disabled person. Because of the particular difficulties faced by disabled people the subsidy has been set at a higher rate than that for able-bodied people. The period of training is related to the particular occupation, with a minimum period of twenty weeks. The employer may claim reimbursement up to \$2 000 for purchase or modification of essential equipment or modification of the workplace to enable the disabled person to undertake employment.

The CES may assess an unemployed person as being especially disadvantaged compared with the majority of unemployed people, *e.g.* ex-prisoners, non-English-speaking migrants. An employer subsidy may be paid in respect of such a person for a minimum of twenty weeks.

### GOVERNMENT OUTLAYS ON EDUCATION IN SOUTH AUSTRALIA

The following tables show selected outlays by the Commonwealth and State Governments on education in South Australia for the past four years.

#### State Authorities: Commonwealth Grants Received for Education, South Australia

Particulars	1979-80	1980-81	1981-82	1982-83
\$ million				
Current Grants:				
Primary and secondary .....	44.0	54.0	67.5	81.7
Tertiary;				
University .....	62.9	70.0	80.8	85.0
Other higher .....	46.9	52.7	56.0	62.6
Technical and further .....	6.7	7.3	8.4	9.6
Other .....	8.1	8.7	9.0	9.3
Total current grants .....	168.6	192.7	221.7	248.2
Capital Grants:				
Primary and secondary .....	15.8	14.0	15.8	16.1
Tertiary;				
University .....	3.5	3.6	4.2	4.6
Other higher .....	4.7	3.2	3.2	3.5
Technical and further .....	8.7	8.7	11.2	12.7
Total capital grants .....	32.7	29.5	34.4	36.9
Total grants .....	201.3	222.2	256.1	285.1

#### State Authorities: Outlay on Education, South Australia

Purpose	1979-80	1980-81	1981-82	1982-83
\$ million				
Primary and secondary education .....	342.8	396.5	426.1	488.1
Final consumption expenditure .....	33.8	35.1	27.8	26.7
Gross fixed capital expenditure .....	27.0	33.2	43.4	56.3
Grants to non-government schools .....	3.1	2.8	4.4	3.6
Other outlay .....	—	-0.1	-1.6	-1.3
Total primary and secondary education .....	406.7	467.5	500.1	573.4

**State Authorities: Outlay on Education, South Australia (continued)**

Purpose	1979-80	1980-81	1981-82	1982-83
	\$ million			
Tertiary education:				
University .....	66.5	73.7	85.1	89.6
Other higher education .....	57.3	63.2	53.4	63.0
Technical and further education .....	57.4	65.8	74.3	85.1
Total tertiary education .....	181.2	202.7	212.8	237.7
Pre-school education and education not definable by level:				
Pre-school education .....	15.4	18.2	20.1	21.1
Special education .....	10.4	12.9	14.4	17.1
Other .....	0.5	1.3	0.4	-1.0
Transportation of students .....	9.1	10.3	12.1	16.8
Education n.e.c. ....	0.2	0.3	0.4	0.4
Total outlay on education .....	623.5	712.8	760.7	865.6

**Further References**

Additional information may be found in the following publications:

- 4202.4 *Schools—South Australia*
- 4206.0 *Colleges of Advanced Education—Australia*
- 4208.0 *University Statistics—Australia*
- 4215.0 *National Schools Collection: Government Schools—Australia*
- 4216.0 *Non-government Schools—Australia*

**6.3 SCIENTIFIC AND RESEARCH ORGANISATIONS****COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANIZATION**

The Commonwealth Scientific and Industrial Research Organization (CSIRO) is the largest scientific research organisation in Australia. It has a total staff of approximately 7 500 located in some 100 laboratories and field stations throughout Australia: about one-third of the staff are scientists.

CSIRO is a statutory body established by the *Science and Industry Research Act 1949*. Under the Act CSIRO replaced, but had continuity with, the former Council for Scientific and Industrial Research (CSIR), which was established in 1926. The *Science and Industry Research Act 1949* as amended by the *Science and Industry Research Amendment Act 1978* stipulates that CSIRO is to be governed by an Executive comprising a full-time Chairman, two other full-time members and between three and five part-time members. It also provides for a statutory Advisory Council and State Committees as independent sources of advice to the Executive.

CSIRO's statutory functions, in summary form are:

- to conduct research and encourage the application of results;
- to liaise with other countries in matters of scientific research;
- to participate and assist in the training and funding of researchers;
- to support research associations;
- to maintain measurement standards; and
- to collect, interpret, publish and disseminate scientific information.

CSIRO's research is carried out in forty Divisions and smaller units. Three of these Divisions have their headquarters in South Australia: these are the Divisions of Horticultural Research, Human Nutrition, and Soils. Two Divisions, Applied Physics and Manufacturing Technology, have branch laboratories in Adelaide. Another two, com-

puting Research and Mathematics and Statistics, have regional offices in Adelaide and the Division of Forest Research has a regional station at Mount Gambier.

#### **Division of Applied Physics, Adelaide Branch Laboratory**

The Division of Applied Physics, a member of the Institute of Physical Sciences, has its headquarters at the National Measurement Laboratory, Sydney, with branches in Adelaide and Melbourne. The Division undertakes research in applied physics related to problems in industry and the community, and collaborates with industry in exploiting promising developments. The Division is also responsible for the establishment and maintenance of the Commonwealth legal standards for the measurement of physical quantities and the provision of means of relating measurements, made throughout Australia, to these standards. The Laboratory has a number of research programs including studies in solid-state physics, the physics of fluids, optics, magnetic and dielectric properties of materials, acoustics, and vibration.

The role of the Adelaide Branch Laboratory includes the establishment of a close liaison with industry and Government departments to assist in solving problems associated with precise measurements using staff expertise from the Adelaide, Sydney or Melbourne Laboratories. The Branch also provides a calibration service in certain fields, particularly in temperature, electrical and physical (mass, volume, density) metrology. The Adelaide Laboratory is a major centre for the measurement of the thermal characteristics of heat insulating materials and handles materials and temperatures in frequent use in industry.

#### **Division of Horticultural Research**

This Division is concerned primarily with research on perennial fruit crops. It has a headquarters laboratory in Adelaide, another laboratory at Merbein, near Mildura, and staff stationed at the CSIRO laboratories at Darwin. The Division is a member of the Institute of Biological Resources. The crops of main interest are grapevines, avocados and citrus, and a range of species that have potential for development in tropical Australia.

Research aims to develop techniques for the selection of improved cultivars or species better adapted to Australian temperate and tropical conditions. Programs of physiological and biochemical research study the relationship between plant performance and the environment to provide a scientific basis for crop management.

The Division is breeding new varieties of grapevine, with emphasis on improved disease and salt tolerance, and is developing and evaluating new systems of grapevine management, such as minimal pruning. Emphasis is placed on the use of tissue culture techniques for the genetic manipulation of plant material and for the selection and propagation of superior plant types in this and other programs. Research is also concerned with understanding plant response to saline conditions at the whole plant and subcellular level, and the genetics of salt tolerance. The aim is to select and breed more salt tolerant cultivars, particularly of grapevines and citrus. Studies of flower bud initiation, pollination mechanisms and fruit development in species such as avocado, macadamia, *Annona* spp, citrus, lychee, pistachio and mango when grown in tropical and/or temperate environments are concerned with controlling and improving crop yield. The Division is investigating the effects of environmental factors such as temperature, water quality and availability, crop load and light regime on plant growth, photosynthetic metabolism and flower and fruit development. Research on the interrelationships between the genetic material contained in the chloroplasts and nuclei of plant cells seeks to evaluate new possibilities for plant improvement using the techniques of genetic engineering. Projects in plant pathology are concerned with grapevine virus and virus like diseases and plant nematodes.

### **Division of Human Nutrition**

The Division of Human Nutrition, a member of the Institute of Animal and Food Sciences, has its headquarters and main laboratories in the grounds of Adelaide University. It also has facilities at its 'Glenthorne' property at O'Halloran Hill.

The Division studies nutritional processes with a view to identifying the existence and health consequences of nutritive imbalances and deficiencies in Australian diets. Its research includes experimental studies in developmental biology and in protein, carbohydrate and lipid metabolism, which are contained within three experimental programs. There is also an epidemiological program concerned with studies of diet, nutrition and disease and with the interrelationships between nutrition and behaviour.

### **Division of Manufacturing Technology**

The Division of Manufacturing Technology, a member of the Institute of Industrial Technology, has its headquarters in Fitzroy, Victoria, with laboratories at Fitzroy and at Woodville North, South Australia. The Division undertakes research directed at the improvement of the manufacture of fabricated components, including the study of processes for manufacture, the integration and control of processes, and the engineering analysis and synthesis of product design for manufacture.

The Division's Adelaide laboratory is concerned with industrial production technology in the fields of fabrication, casting of metals and metal forming. Facilities are in operation for undertaking research and development on an industrial scale in welding, gravity casting and in aspects of surface coating such as plasma spraying.

### **Division of Soils**

The Division of Soils is a member of the Institute of Biological Resources, which conducts research relating to the management and productivity of Australia's agricultural, forestry, soil, water and pastoral resources, and the management and conservation of Australia's ecosystems. The research of this Division is concerned with the use of soils in agriculture and forestry, and the role of soils and soil materials in hydrology, plant growth, as habitats for flora and fauna and as a base for engineered structures. The work is carried out in projects which are grouped into broader programs: soil genesis and geochemistry; soil colloids and mineralogy; characterisation and classification of soils; soil distribution and landscape relations; soil and root biology and root pathology; carbon and nitrogen cycling; ecology of soil fauna; chemical fertility and toxicity in soils; environmental pollution; water and solute movement in soils; the physical environment; mechanical properties, soil engineering and erosion.

Within each program, understanding of important processes is sought, together with practicable methods for conservative management of soils. The research of the Division supports and complements the more applied research of State organisations.

The Division accepts requests for collaboration and consultation.

The headquarters laboratory is in Adelaide, with smaller groups in regional laboratories in Brisbane, Canberra and Townsville. About half the staff is in the Adelaide laboratories.

### **DEFENCE RESEARCH CENTRE SALISBURY**

The Defence Research Centre Salisbury (DRCS), is the largest research and development complex in Australia and constitutes part of the Defence Science and Technology Organisation (DSTO). The centre, which occupies an area of 1 170 hectares near Salisbury, had a staff of nearly 2 700 in November 1984.

DRCS comprises three separate laboratories and a supporting administration branch. The Electronics Research Laboratory undertakes research and development related generally to surveillance including radio science, radar, infra-red physics, optics, electro-optics, electronic warfare and computing science. The Weapons Systems Research Laboratory undertakes research and development related generally to weapon systems and underwater detection systems including aeroballistics, guidance and control of weapons and remotely-piloted vehicles, rocket and gun propulsion, sonobuoys and signal processing. The Advanced Engineering Laboratory undertakes engineering feasibility studies, development, design and manufacture of experimental and prototype systems and equipment in the fields of mechanical, electrical, electronic and communications engineering.

Each Laboratory at DRCS provides specialised consulting services to the Australian Defence Force, to Canberra-based staff and to other laboratories of the Defence Science and Technology Organisation and, where appropriate, to industry.

Facilities are provided within DRCS for branches of firms that have contracts in the defence field.

Edinburgh RAAF Base, headquarters of the Royal Australian Air Force in South Australia, adjoins DRCS. Aircraft used by DRCS for trials or the development of equipment operate from this base.

A special article on DRCS, then called Weapons Research Establishment, together with maps and diagrams was included on pages 184-92 of the *South Australian Year Book* 1969.

#### Woomera

Within the Woomera restricted area of some 130 000 square kilometres are a Trials Area, comprising instrumented Range and Service exercise and training areas, and the Defence Support Centre Woomera, comprising a township and an adjacent technical facility. Trials are conducted on a campaign basis for the Australian Defence Force by the DSTO.

A Joint USA/Australia Defence Space Communications Station (JDSCS) is located near Woomera and makes use of the Defence Support Centre there.

The government-owned Woomera township is situated approximately 500 kilometres north-west of Adelaide and has a current population of about 1 700, including some 1 000 associated with JDSCS. It has all necessary amenities and services, including hospital, schools, community store and shops, churches, theatre, clubs and a wide range of sporting facilities.

#### WAITE AGRICULTURAL RESEARCH INSTITUTE

The Waite Institute was established as a research institute at Urrbrae in 1924, through the generous benefaction of Mr Peter Waite.

Amongst the many research programs currently being undertaken at the Institute are breeding programs for wheat, barley and triticale, investigations of mechanisms of drought tolerance in cereals, soil chemistry, biological control of insects, pasture management, beef cattle metabolism, investigations into plant viruses, animal reproduction and many other projects of vital importance to agriculture in Australia and overseas.

In addition to the Waite Agricultural Research Institute, the CSIRO Divisions of Soils, Horticulture, and Mathematics and Statistics and the Australian Wine Research Institute are located on the Waite Institute campus, making it one of the most important centres of research in Australia.

Further details relating to the Waite Institute may be found in Part 6.2 Education.

### AUSTRALIAN WINE RESEARCH INSTITUTE

The Australian Wine Research Institute, established in 1955 from a small research unit formed within the University of Adelaide in 1934, promotes research and other scientific work for the Australian wine industry.

The Institute is administered by a nine-member council consisting of representatives from the Australian Wine and Brandy Corporation, the Australian wine industry, the Commonwealth Government, the Commonwealth Scientific and Industrial Research Organization and the University of Adelaide. It is funded by contributions from the Australian wine industry, a grant from the Commonwealth Government, and income from a Trust Fund.

At its laboratories situated at Urrbrae, the Institute conducts applied research into the microbiology and chemistry of the production of wine and brandy. Extension services assist commercial winemakers with technical problems, provide tested yeast and bacterial cultures for wine fermentation and communicate research developments to the wine industry. Analytical services are also offered, for a fee.

The John Fornachon Memorial Library maintained by the Institute is a specialised library of technical literature on wine.

### TECHNOLOGY PARK ADELAIDE CORPORATION

The Technology Park Adelaide Corporation was constituted under the Technology Park Adelaide Act, 1982. Technology Park Adelaide is Australia's first comprehensively planned centre for scientific research and development and high technology manufacturing.

Located on an 85 hectare site only thirteen kilometres north of Adelaide and adjacent to complementary service facilities, including the Levels campus of the South Australian Institute of Technology and Parafield Airport, the Park provides a unique environment for technologically innovative industries.

Innovation House, designed and developed as an integral part of Technology Park, provides the benefits of an industrial park, university research centre and prestige office development in the one building.

Further details relating to Technology Park can be found in Part 9.3 Manufacturing.

References to the Australian Mineral Foundation and the Australian Mineral Development Laboratories can be found in Part 9.2 Mining, Forestry and Fisheries.

## 6.4 CULTURE AND RECREATION

### THE PERFORMING ARTS

#### The Adelaide Festival Centre

The Adelaide Festival Centre is a performing arts complex on a 2.5 hectare site located on the banks of the River Torrens near the centre of the city of Adelaide. The Centre comprises a multi-purpose concert hall and lyric theatre, two drama theatres and an open-air amphitheatre. Stage Three of the Centre's building project, completed in 1977, comprises a two-level underground car park and 0.75 hectares of open plaza, featuring an overall sculptural design. Additional convention facilities, completed in 1980, provide a flexible multi-purpose venue capable of seating 800 people, or 500 at banquets, and is also able to be partitioned into sound-proof meeting rooms. The restaurant and bar areas have been relocated to take full benefit of the views over Elder Park.

The Adelaide Festival Centre Trust administers the Festival Theatre, The Playhouse, The Space, Amphitheatre and Opera Theatre and is the State's largest entrepreneur of outside productions for these venues. The Festival Theatre attracts productions and performers to South Australia which otherwise might never be seen in the State.

A special article on the Festival Centre was included on pages 245-249 of the *South Australian Year Book* 1975.

#### *The Festival Theatre*

The Adelaide Festival Theatre was the first completed auditorium of the Centre and was officially opened on 2 June 1973. Seating for approximately 2 000 people on three levels has been arranged in continental style with access from large foyers along the sides of the auditorium. The Theatre has been designed for a comprehensive range of activities, from opera and ballet to variety and jazz/rock concerts.

The Australian Ballet gives annual seasons in the Festival Theatre and the Adelaide Symphony Orchestra uses the Theatre for its annual orchestral and youth concert series as well as for special celebrity concerts by international artists and orchestras. The Adelaide Festival Centre Trust and principal Australian commercial entrepreneurs use the Centre for a wide variety of other presentations.

#### *The Drama Complex*

The drama complex alongside the Festival Theatre was completed in 1974. The largest auditorium in this complex is The Playhouse, a 600-seat, two-level theatre which is designed for both proscenium and extended-stage productions.

The Playhouse is served by a production workshop consisting of design studio, carpentry and paint shops, assembly areas, wardrobe, millinery and wigmaking sections and a darkroom.

Alongside The Playhouse and beneath plaza level is The Space, a 320-seat experimental theatre. A completely flexible auditorium, The Space can be arranged in almost any variation of seating and acting areas. It has been designed as a specific venue for experimental performances and teaching workshops.

Between the Festival Theatre and The Playhouse there is an open-air Amphitheatre which takes advantage of the natural slope of the site.

#### *The Silver Jubilee Organ*

In April 1979, the Festival Theatre's new Silver Jubilee Organ was inaugurated, as a tribute to the first 25 years of the reign of Her Majesty Queen Elizabeth the Second. Built and installed at a cost of \$402 000, it is stored backstage at the Theatre and can be moved to different parts of the stage by two people using an air cushion similar to that which operates on hovercraft. It has two consoles, one integral with the instrument and one remote, giving it the versatility of solo orchestral and operatic performance. The organ has 4 200 pipes, fifty stops, three manuals and mechanical (tracker) key action.

#### *The Adelaide Festival*

In 1958, a small group of Adelaide citizens developed plans for the first Adelaide Festival of Arts, which was held in 1960. Further festivals have been held in March in years of even number from 1962.

The Adelaide Festival has achieved many artistic triumphs in its history and has been instrumental in bringing to Australia for the first time many notable overseas companies, performers and artists. It has seen the first performances of scores of major Australian productions and an increasing number of world premieres commissioned specially by or for the Festival. Notable world premieres have included Peter Maxwell Davies' music

theatre piece for The Fires of London, *Miss Donnithorne's Maggot* (1974), South Australian composer Richard Meale's oboe concerto *Evocations* performed by Heinz Holliger and Collegium Musicum of Zurich (1974), Sir Robert Helpmann's ballets, *The Display* (1964) and *Perisynthyon* (1974), Jack Hibberd's *A Toast to Melba* performed by the Australian Performing Group (1976), Patrick White's play *Night on Bald Mountain* (1966) and *Signal Driver* (1982), the Australian Dance Theatre's *Transfigured Night* and *Stripsody* (1980) and Robin Archer's *Songs from Sideshow Alley* which was specially commissioned for the 1980 Festival, and her epic piece for young people *The Three Legends of Kra* (1984). First Australian performances have included the Janacek operas *The Excursions of Mr Broucek* (1974) and *The Makropoulos Affair* (1982), Benjamin Britten's *War Requiem* (1964), his church parable *The Burning Fiery Furnace* (1970), his opera *Death in Venice* (1980) and Sir Michael Tippett's opera *The Midsummer Marriage* (1978) and the first Australian performance of a Shostakovich opera *Lady Macbeth of Mtensk* (1984).

World famous writers who have been guests at Festival Writers Week include Yevgeny Yevtushenko, Edna O'Brien, Anthony Burgess, Allen Ginsberg, John Updike, Alan Moorhead, Angus Wilson, Nadine Gordimer, Wole Soyinka, Ted Hughes, Adrian Mitchell, Fay Weldon, Maxine Hong Kingston, D. M. Thomas, Salman Rushdie and Russell Hoban.

The completion of the Adelaide Festival Centre has caused a shift in the emphasis of the Festival. The regular appearances of leading overseas performers and companies at the Centre throughout the year has enabled the Festival to engage in activities considered more appropriate to arts festivals. These include the commissioning of new works, the encouragement of local companies and artists and the provision of a variety of programs to attract greater public interest and appreciation.

### Come Out

In May 1975, the Adelaide Festival staged 'Come Out', the first in a series of biennial festivals of performing, creative and visual arts for young people held in years of odd number, between the main Festivals. 'Come Out' has become the largest and most important youth festival of its kind in the world. In 1984 'Come Out' became an independent incorporated body with its administration based at the Carclew Youth Performing Arts Centre but with the Adelaide Festival Centre Trust continuing to provide support facilities and expertise. The 'Come Out' Festival in May 1985 was a major highlight of International Youth Year.

### Regional Cultural Centre Trusts

The Regional Cultural Centres Act, 1976-1984 provides for the establishment of Regional Cultural Centres, at places designated by proclamation, and for their operation and management. The broad definition of the aim of the Trusts is 'to serve the cultural needs of their regions'. The Trusts have accomplished the following:

- construction of a 500-seat theatre in each of the towns of Mount Gambier and Port Pirie, commencement of a 500-seat theatre in Renmark and 500-seat theatre in Whyalla;
- appointment of Community Arts Officers to serve at a number of Regional Cultural Centres. Officers are based at Berri, Mount Gambier, Port Augusta, Port Lincoln, Port Pirie and Whyalla;
- acquisition by the South East Trust of the Naracoorte Art Gallery, which has remained under the direction of the Naracoorte Gallery Management committee, and a hall in Mount Gambier which is used by art and craft groups.



The Trust has also established the 'Institute Space' in the main shopping area of Mount Gambier;

- compilation by each of the Trusts' Community Arts Officers of regional directories of arts resources, facilities and activities within the regions which provide an information and advisory service to local groups and individuals;
- involvement, in conjunction with the Arts Council of SA and Adelaide based organisations such as the Contemporary Arts Society, Women's Art Movement, and Craft Council of SA, in the co-ordination of touring exhibitions and specific creative projects;
- the formation by the Eyre Peninsula Cultural Trust of a multi-skilled performing arts group known as the Harvest Theatre Co. The personnel are professionals who perform for adults and children at schools, district halls, hotels, sporting clubs and community venues throughout the Eyre Peninsula region and tour others regional areas of the State.

The Trust are also involved in the co-ordination of workshops, assistance in presenting local craft fairs and exhibitions by local groups and individuals, and assistance in establishing and developing local art and craft groups.

#### **Australian Dance Theatre**

Re-established in 1977 under the artistic direction of Jonathon Taylor, the Australian Dance Theatre has become an internationally acclaimed modern dance company performing to South Australian and Victorian audiences and touring to other Australian States. The company creates most of the works in its repertoire. It has performed at the Edinburgh Festival and toured throughout Europe and in South-East Asia.

#### **The State Theatre Company**

The State Theatre Company of South Australia has its home at The Playhouse in the Adelaide Festival Centre. Its objective is to promote the art of the theatre by the presentation of performances, commissioning new plays and music, training of persons concerned in theatrical presentations, establishing and conducting educational programs and establishing a theatrical archival collection.

Each year the company presents a major season of plays in Adelaide made up of Australian works and established classics, and also tours country areas of South Australia.

The company has a youth theatre team, 'Magpie', which provides schools (in both metropolitan and country areas) with a team of actors educating through drama by entertaining students on a participatory level. Additionally, 'Magpie' presents plays designed to attract families and young people to the theatre.

The State Theatre Company presents a 'Days with the State Theatre Company' program which provides students with an opportunity to look behind the scenes at the workings of a professional theatre company. The company has a playreading panel which advises on new plays submitted by Australian writers and a costume hire shop which supplies costumes to many amateur theatre groups as well as hiring fancy dress to the general public.

#### **Carclew Youth Performing Arts Centre**

Carclew advises the Government on youth performing arts policy, recommends the allocation of grants for youth arts projects, assists in co-ordinating the activities of companies working with or for young people, and mounts special projects of its own, often with the assistance of the Commonwealth Government through the Australia Council.

Carclew's facilities include: a Lending and Information Service; the Youth Arts Press; venues for meetings, rehearsals and other activities; the Schools Arts Information Service; a National Office which links up with other youth performing arts, produces the national magazine of youth performing arts, 'Lowdown', and is also the Australian Centre for ASSITEJ, the International Association of Theatre for Children and Young People. In addition, Carclew provides a home for the National Music Camp Association, which controls the Australian Youth Orchestra. Carclew also operates *Theatre 62* as a children's and youth theatre.

#### **University of Adelaide Theatre Guild**

The University of Adelaide Theatre Guild is a society formally associated with the university.

The objects of the Guild as set out in its constitution are:

- to contribute to the cultural life of the University and the community by the promotion of theatrical activity;
- the production and the study of plays of literary value, historical plays, plays about current ideas and events, and plays showing the development of the theatre;
- the encouragement of and participatory involvement in progressive theatrical developments;
- the study, the practice and the dissemination of knowledge of the arts and crafts of the theatre.

In 1983, the Theatre Guild presented five productions. Three South Australian premieres were produced, namely, *The World of Charles Dickens*, *The Elephant Man*, and *Garden Party*. Tennessee Williams' famous play *A Streetcar Named Desire* and Ben Travers' *Rookery Nook* were also presented. All productions took place in the Little Theatre at the University of Adelaide.

#### **Elder Conservatorium of Music**

The Elder Hall, situated within the grounds of the University of Adelaide on North Terrace, is the concert hall of the Conservatorium. It was built in 1900 and for many years was a general purpose hall. Since the 1950s it has been used mainly for musical purposes. Concert experience for students is provided through regular public concerts. The University Music Society, each year, arranges a series of eight concerts, by members of the staff, who also provide a large number of free public concerts and recitals during the year.

The Hall is a first-class concert hall seating 712 people, with a stage capable of accommodating an orchestra of seventy-five performers and a choir of seventy-five people. It is fully air-conditioned, and of excellent acoustical quality.

Particulars relating to the educational role of the Elder Conservatorium are given in Part 6.2.

#### **Concerts**

The Adelaide Symphony Orchestra gave eighty-three public concerts for the Australian Broadcasting Corporation (ABC) in 1984. This number included 38 metropolitan subscription and special concerts and six in country centres. Another thirty-five were free concerts, including eighteen city and ten country schools' concerts.

Regular concerts are given by the Adelaide Symphony Orchestra, in the Adelaide Festival Theatre, for adult and youth subscribers. The Adelaide Town Hall is used for a series of concerts by the Adelaide Chamber Orchestra. Choral music is presented by various choirs in occasional concerts throughout the year, the major large body being the

Adelaide Chorus. The State Government's subsidised regional opera company, The State Opera of South Australia, stages regular productions throughout the year in Adelaide and country centres.

The State Opera has formed a special Youth Company which enables young people to see the main opera productions at a nominal cost, as well as mounting its own special youth opera productions for, and by, young people.

Chamber music is available through both the Musica Viva series of concerts, which feature top-ranking international and Australian ensembles, and other series featuring artists based at the Elder conservatorium and other tertiary institutions.

## FILMS

### South Australian Film Corporation

The South Australian Film Corporation (SAFC) is constituted under the South Australian Film Corporation Act, 1972-1981. The Corporation has the sole right to produce, or arrange for the production of, films for or on behalf of the State Government.

The Corporation also may undertake film production on its own behalf or for other organisations. It produces its own feature films for cinema and television release and also enters into co-production and investment arrangements with other producers. Productions in which it has been involved so far include the cinema features *Sunday Too Far Away*, *Picnic at Hanging Rock*, *Storm Boy*, *The Last Wave*, *Blue Fin*, *Breaker Morant*, and the television mini-series *Sara Dane* and *Under Capricorn* which have received Australian and overseas acclaim from audiences and critics.

The Corporation also produces many short films for commercial sponsors, in addition to a wide range of films for State Government departments and instrumentalities. Prints of these films are sold extensively throughout Australia and abroad. Many have won Australian and international awards for excellence.

Other functions of the corporation include the distribution and exhibition of films, the provision of library and other services relating to films and research into the effectiveness of films generally. The State Film and Video Library of South Australia, which provides a free lending film service throughout South Australia, is a division of SAFC.

The Corporation encourages feature film and television production by providing studio and sound mixing facilities for rental. Liaison services for producers based outside South Australia also are available.

All SAFC operations and staff are centred at Hendon. This complex provides a complete film production facility, including: two large sound stages with dressing rooms, make-up, wardrobe, laundry and office facilities; stereo and stereo television sound mixing and post-synch recording studios; large set construction and storage areas and extensive costume, props and equipment hiring service. The State Film and Video Library also occupies part of the SAFC complex at Hendon.

## ART GALLERIES

### Art Gallery of South Australia

The National Gallery of South Australia was founded in 1881 as part of the South Australian Institute. In 1884 this became the Public Library, Museum and Art Gallery of South Australia. Its name was changed to the Art Gallery of South Australia in 1967, and became a Division of the Department for the Arts in 1980.

The first part of the present building, now known as the Elder Wing, was completed in 1900. The Melrose Wing, on the Gallery's western side, was added in 1936 and the facade

was rebuilt at the same time. A new three-storey northern wing was built in 1962 with further renovations completed in 1979. The Gallery provides free Gallery Guide and Education services, a Travelling Art Exhibition and a smaller touring metropolitan exhibition.

The staff of professional and technical officers undertakes the research development, care and conservation of the collections and the preparations of exhibitions. A special article on conservation in the Art Gallery of South Australia was included on pages 39-45 of the *South Australian Year Book* 1983.

The Gallery's collections are broad and include a representative selection of Australian and European paintings and sculptures. The Gallery's holdings include prints, drawings, photographs, decorative arts, furniture, weapons, medals, coins and stamps. The collection of South Australian historical items includes relics and pictorial material relating to the discovery, exploration and settlement of the colony. The ceramics holdings include one of the finest South-East Asian collections in the world.

Some works by established European and Australian artists are permanently displayed while other more contemporary pieces are exhibited regularly. South Australian art is well represented in frequently changing exhibitions in the Gallery of South Australian Art (formerly the Historical Museum), at the rear of the main Gallery building. The Gallery presents major international exhibitions annually and is particularly active during the biennial Festival of Arts.

The Gallery has received many bequests; the Elder, Morgan Thomas, David Murray, Ragless, Boxall, Mortlock and Kohlhagen bequests total over \$252 000. In 1964 Mrs Gladys Penfold-Hyland gave the Gallery a collection of English old master paintings, antique silver and porcelain, in memory of her late husband, Mr Frank Penfold-Hyland. This remains the finest gift ever received by the Gallery. The State Government makes an annual grant to the Gallery for the purchase of works of art.

The Art Gallery Foundation was established in 1981 as part of the Gallery's centenary celebrations. It assists with the raising of substantial funds towards major acquisitions for the collections and has already augmented Gallery holdings through gifts in kind totalling over \$200 000. The Friends of the Art Gallery of South Australia, established in 1969, has approximately 2 500 members, and actively supports the Gallery through educational events and social functions. Total annual attendance at these activities is about 13 000.

### **Jam Factory Craft Centre**

Originally known as the South Australian Craft Authority, the Jam Factory workshops were established in 1973 with the aim of developing a craft climate in South Australia through which standards of workmanship and design could be improved to an international level. The present policy at the Jam Factory is to employ skilled craftspeople as Workshop Heads, responsible for production and training programs within the craft workshops which include glass, pottery, leather and knitted textiles.

The Jam Factory Centre is located at Payneham and includes a Gallery and shop which markets quality items produced by South Australian craftspeople working outside the Jam Factory as well as by Jam Factory employees.

The Jam Factory also operates twelve workshops which are available on lease to independent craftspeople and organisations and provides premises for the Crafts Council of South Australia.

### Other Galleries

Other galleries are operated by the Adelaide Festival Centre Trust, the Royal South Australian Society of Arts, the Women's Art Movement, the Contemporary Art society, the Experimental Art Foundation and a number of individual proprietors.

## MUSEUMS AND HERITAGE

### South Australian Museum

Founded in 1856 as part of the South Australian Institute, the South Australian Museum became a separate institution with its own board in 1940 under the provision of the Museum Act, 1939. The South Australian Museum Act which defines the present day functions of the Museum was proclaimed on 11 March 1976. A Board is responsible for the operation of the Museum and its members are appointed by the Governor under the provisions of the Act. The Museum is a division of the Department for the Arts and is located on North Terrace between the State Library and the Art Gallery of South Australia. The Museum aims to increase people's understanding of themselves, society and the natural world they inhabit. Accordingly the Museum collects and preserves appropriate specimens, artefacts, documents and other material, undertakes research associated with the collections and interprets the collections for the public in a number of ways including exhibitions, education activities and information/advisory services. The ninety staff members are located in four divisions—administration, community services, natural sciences and human sciences. The Museum has a wide representation of disciplines but its main work is in archaeology, ethnology, natural history and geology.

The research of the scientific staff primarily involves the naming, identification and classification of animals and minerals. Considerable emphasis is placed also on the distribution of specimens and artefacts in space and time and their interrelationships with the environment. With the current interest in, and need for knowledge concerning conservation and environmental deterioration, this work is of increasing importance.

Conservation of collections is an important function of the Museum and emphasis is placed on a proper storage environment, protection and restoration of collections, particularly perishable ethnographic items. Research into this area is also carried out. A special article on conservation in the South Australian Museum was included on pages 34-39 of the *South Australian Year Book* 1983.

As well as curation, research and fieldwork, staff are involved in providing information and specimens for displays, lecturing to interested groups, providing information and advice to the public and scientific colleagues and servicing loans of materials to specialists around the world. Results of the research work of staff members are published in the *Records of the South Australian Museum* and in scientific journals and books throughout the world. The Museum's Scientific Library houses more than 33 500 books and bound journals.

The work of the Museum has been supported by the Friends of the South Australian Museum who have been responsible for the purchase of many notable additions to the collection.

Each year between 400 and 500 thousand people visit the Museum. Public entertainment and education involves the presentation of temporary and long term displays in galleries covering nearly 4 000 square metres. Exhibits deal with such diverse topics as mammals, birds, fish, reptiles, minerals, meteorites, Egyptology, fossils and Australian and Pacific ethnology.

An Education Service assists teachers in using and taking classes through the Museum. A Travelling Education Service (TES) which enables country school children to participate in a specially designed exhibition which tours country areas is also in operation.

The Museum also has an Information Service which deals with public inquiries and provides information on Museum activities. Numerous booklets and information leaflets are available at the Museum.

A special article on the Museum's collections was included on pages 31-42 of the *South Australian Year Book* 1982.

### **Constitutional Museum**

The Constitutional Museum was established to highlight, preserve and interpret South Australia's political heritage. It is Australia's first political museum, and uses a variety of techniques to show the State before the first Europeans arrived in 1836, to the present time.

The Museum is housed in the restored former Legislative Council building next to Parliament House on North Terrace, Adelaide. It is one of only five pre- 1875 buildings to survive in the city. The original building housed both Houses of State Parliament until 1898, when the House of Assembly moved to new quarters next door. In 1939 the Legislative Council moved out and the structure was listed for demolition, but upon the outbreak of the 1939-45 War the building saw service as a Wartime Recruiting Centre. More recently it has been a social club and a Government office.

In 1978 plans to restore the building to its 1875 condition were announced, and after two years of research and renovation it was re-opened as the Constitutional Museum in August 1980. The main feature of the Museum is a 100 minute program called *Bound for South Australia* which takes visitors through three main areas of the museum and the entire sweep of South Australia's history. Chamber One uses slides, soundtrack, theatrical sets and electronic techniques to tell the story of the State up to the granting of self-government in 1856. Chamber Two, the restored House of Assembly Chamber, offers a sound-and-light re-enactment of major political debates up to 1901. In Chamber Three, twenty-six projectors and more than 1 200 slides unfold the history of the State from Federation to the present day. In addition, the Museum mounts changing displays on political and historical themes in its remaining exhibition areas.

### **Mile End Railway Museum**

The Railway Museum has been established and maintained by a voluntary organisation, the Mile End Railway Museum SA Inc. which maintains a large selection of locomotives, rolling-stock and railway artefacts for display. These exhibits have been obtained from various railway systems which have operated in all areas of this State. The rolling-stock dates from 1877 and the artefacts from 1856. The Museum is open to the public on the first and third Sundays of each month and is situated at Railway Terrace, Mile End South.

### **Aboriginal Heritage**

Aboriginal sites and items are presently protected under the Aboriginal and Historic Relics Preservation Act, 1965 which is the responsibility of the Minister for Environment and Planning. Examples of Aboriginal culture protected by the Act include prehistoric campsites, ceremonial grounds, cave paintings, rock engravings and canoe trees.

A particular site, item or series of items may be protected, by declaring the area in which it is found either a Prohibited Area or an Historic Reserve. A complete Register of all prohibited areas and reserves, and of known but unproclaimed sites, is maintained

by the Aboriginal Heritage Branch of the Department of Environment and Planning. Since 1 January 1978 no further historic reserves or prohibited areas have been proclaimed in South Australia.

A summary of the three major Aboriginal cultural groups is provided in a special article entitled 'Aboriginal Culture in South Australia', included on pages 27-38 of the *South Australian Year Book* 1978. A special article on Aboriginal relics was included on pages 201-8 of the *South Australian Year Book* 1969.

### European Heritage

The South Australian Heritage Act, 1978-1982 administered by the Minister for Environment and Planning gives official government recognition to items of the State's European heritage. It provides incentives for conservation and protection for heritage items which may be in the form of land, buildings or structures. Examples include historic sites, early settlement and industrial sites, buildings of all categories (such as cottages, churches, and homesteads), bridges, wharves, mining structures, and gardens.

The Act establishes the process for entering items on the Register of State Heritage Items and for the designation of State Heritage Areas. The South Australian Heritage Committee advises the Minister on the inclusion of items on the Register and other matters concerning heritage conservation. Three State Heritage Areas and seven hundred heritage items are currently included on the Register. The inclusion of an item entitles the owner to apply for financial assistance from the State Heritage Fund for conservation work. The State Heritage Branch of the Department of Environment and Planning administers the Fund and provides expert advice on the conservation of heritage items. Development of items, whether alterations or additions, is controlled through provisions in the Planning Act, 1982-1985.

### The National Trust of South Australia

The National Trust of South Australia was established by Act of Parliament in 1955. It encourages the preservation and restoration of buildings of architectural, historic or scientific interest, the protection of scenic beauty and the conservation of land, flora and fauna.

The Trust, which is administered formally by a volunteer council, has fifty-six branches spread throughout the State. Finance is provided by means of gifts, legacies, fund raising functions, subscriptions and government grants.

Buildings of particular significance in South Australia are assessed on their architectural or aesthetic historic merit and are categorised as either:

Classified, *i.e.* buildings having great historic significance or high architectural qualities, the preservation of which is essential to the heritage of Australia; or

Recorded, *i.e.* buildings which contribute to the heritage of Australia and whose preservation would be encouraged.

Examples of the natural areas cared for are 'Wilabalangaloo' at Berri, 'Watiparinga' at Eden Hills, 'Roachdale' at Kersbrook and 'Engelbrook' at Bridgewater, which are generally open to the public. The many beautiful or historic Trust properties include 'Collingrove' at Angaston in the Barossa Valley, 'Beaumont House' in the Adelaide suburb of Beaumont, the Chaffey Brothers homestead and museum at Renmark, and the 'Marble Hill' ruins of the Governor's former summer residence and its reserve at Norton Summit.

Marble Hill provides magnificent views of the Adelaide Hills and Plains and has an interesting museum which exhibits plans of the building, artefacts and photographs of the building exterior and interior before its destruction by fire on the 2 January 1955.

The Trust also owns the G.S. Sandison Reserve at Hallett Cove, an area of international scientific interest because of its glacial pavements, which is open to the public.

In 1963 the paddle steamer *Marion* was purchased and refitted and now floats in the old graving dock at Mannum containing a museum of river exhibits.

At December 1984, the National Trust of South Australia controlled some 142 properties, including buildings, reserves and other historical structures, many of which are open to the public. Many of these buildings are used as museums of social history.

The Jubilee 150 Board, the History Trust and the Department of Environment and Planning together with the Trust will develop the State Maritime Museum at Port Adelaide, the Copper Mines Museum and complex at Moonta, and with local government the conservation project at Burra for the State's 150th birthday celebrations.

The headquarters of the National Trust in South Australia is in the historic and beautiful mansion Ayers House, once the home of the five times Premier of South Australia, Sir Henry Ayers.

## LIBRARIES

### State Library

The State Library of South Australia is an important cultural feature of the State and meets significant areas of need in information, education, recreation and research. It is situated on North Terrace adjacent to the South Australian Museum and Art Gallery of South Australia. In 1980 the administration of public libraries was largely separated from the State Library to become the Public Libraries Division of the Department of Local Government. In 1982, the administration of the two lending branches, Adult and Young People's was transferred to the Public Libraries Division. Legislation covering libraries has been updated by the Libraries Act, 1982-1984.

The current complex consists of three adjoining buildings: the Jervois Wing, the Bastyan Wing, and the Institute Building. Collections housed in these buildings predate the formation of the colony tracing their origins to the formation of the South Australian Literary Society in London in 1834. The circulating and reference library formed by the Literary Society was landed in South Australia in 1837 and merged with the library of Adelaide Mechanics Institute in 1856. In 1884 a Public Library, Museum and Art Gallery Act placed the collections and services of what had become the South Australian Institute under the control of a Board of Governors. On assuming control of the Institute, the Board transferred the reference books to a Public Library and transferred the remainder to the Adelaide Circulating Library. The Public Library was housed in the Jervois Wing and the Adelaide Circulating Library in the Institute Building.

The modern character of the Library was established in 1940 when, after the Price Report of 1937, the Library was separated from the Museum and Art Gallery and became a State Government department administered by the Libraries Board of South Australia.

The Jervois Wing continued to house most of the Library's collections until 1967 when the name of the Library was changed to the State Library of South Australia and the first stage of the Bastyan Wing was completed.

### State Reference Library

Reference, information, and research services are offered through the State Reference Library. These services are primarily based on a collection which includes some 450 000 books and pamphlets, 13 000 newspaper and periodical titles, 80 000 maps and access to computerised information retrieval services. The Reference Library has a representative basic collection of nineteenth and twentieth century materials in all subjects except



medicine and law (The University of Adelaide has an extensive law library, while both the University of Adelaide and The Flinders University of South Australia have branch libraries for medicine.) It has considerable strength in a number of subjects including librarianship, wine, jazz, Australian Aborigines, River Murray shipping and nineteenth century illustrated works on natural history. There are also some 38 000 books in the Children's Literature Research Collection, a special collection formed to assist in the study of children's books.

Where items are not held by the Library it is normally possible to borrow or obtain photocopies from other libraries in South Australia, interstate or overseas. In 1983-84, 113 968 inquiries were answered. *Pinpointer*, an index to popular periodicals, is published bi-monthly.

Since 1878 legislation has provided for the deposit in the Library of copies of all copyright items published in South Australia. This material forms the basis of the South Australiana collections which are thus a valuable resource for information about the history and development of the State. Prominence is to be given to these collections by the establishment of a separate South Australiana Library to incorporate all South Australian materials including private archival records.

### State Archives

The State Archives are housed within the State Library Building. The Archives, established in 1919, are the repository for the public and private historical records of South Australia. In 1925 legislation was passed requiring reference to the Libraries Board before destroying or disposing of public records. At the end of June 1984 there were approximately 22 000 linear metres of material stored in the Archives. In 1983-84, 19 960 inquiries were handled involving 47 079 issues of document views, maps, or printed sources. A journal, *South Australiana*, is published twice a year.

With the separation of private records to the projected South Australiana Library it is also hoped to establish a separate office for public records allowing the Archives to assume a more active role in servicing Government agencies and preserving their records for research. A special article on conservation in the State Library and State Archives of South Australia was included on pages 45-48 of the *South Australian Year Book* 1983.

### Community Services

In 1938 a Country Lending Service was established to provide books for residents in the country districts of the State, none of which had a free local library at the time. As the Country Mail Service this facility continues to cater for country readers, now limited to those who do not have access to a local public library. Country Mail is one of the Community Services offered; others are the provision of multi-cultural material, liaison with ethnic groups, and a lending service to institutions throughout the State, such as hospitals and gaols, and more particularly to elderly citizens' homes and housebound people within the City of Adelaide.

### Adult Services

With origins dating from the formation of the Adelaide Lending Service in 1946, the Adult Services continue the original role of direct lending to residents of the metropolitan area, but now offer a wider variety of materials. The collections include large print and foreign language books and periodicals, paperbacks, prints, posters and audio cassettes. Car manuals, musical scores, and drama sets are also available. A similarly wide range of material is available through the Children's and Youth Services.

### Children's Services

The Children's Services, formerly the Children's Library, was established in 1915 and

is believed to be the oldest of its type in Australia. As well as the normal lending role, visits by school classes, and storytelling, both inside the library and at outside venues, are also featured.

### Youth Services

Specific service to young people between the ages of thirteen and eighteen dates from 1957 with the establishment of the Youth Lending Service comprising a collection of books, cassettes, posters and paperbacks.

The following table gives details of volumes held and material lent by the State Library.

State Library of South Australia							
Year	Reference Services	Adult Services	Youth Services	Children's Services	S.A. Collection	Central Pool for Local Public Libraries	Total
At 30 June:							
					BOOKS: VOLUMES HELD		
1981 .....	413 000	146 000	24 000	69 000	—	200 000	852 000
1982 .....	419 000	151 000	25 000	70 000	—	157 000	822 000
1983 .....	428 000	<i>n.y.a.</i>	<i>n.y.a.</i>	<i>n.y.a.</i>	—	163 000	<i>n.y.a.</i>
1984 .....	444 000	<i>n.y.a.</i>	<i>n.y.a.</i>	<i>n.y.a.</i>	(a) 28 000	216 000	<i>n.y.a.</i>
To 30 June:							
					MATERIAL LENT (b)		
1981 .....	(c) 97 000	988 000	129 000	190 000	—	—	1 404 000
1982 .....	(d) 35 000	978 000	107 000	159 000	—	—	1 279 000
1983 .....	—	(e) 918 000	119 000	(f) 142 000	—	—	1 179 000
1984 .....	—	887 000	129 000	120 000	—	—	1 136 000

(a) South Australian Collection transferred from Reference Services in 1984. (b) Loans of volumes and other library material. (c) Lending of periodicals from the Reference Services ceased from 30 June 1981. (d) Lending of books ended from 30 June 1982. (e) From 1982-83 excludes bulk loans. (f) From 1982-83 excludes loans to kindergartens.

Tours of the State Library are available to interested groups, and exhibitions are arranged regularly within the Library. Photographic services offered by the Library include the production of negatives from library materials, and photocopying facilities.

### Local Public Libraries

In June 1984, eighty-eight local authorities were operating a total of 106 public libraries including twenty-eight school-community libraries and twelve mobile libraries, under the provisions of the Libraries Act, 1982-1984. This Act, which gives the initiative for the establishment of free public libraries to local government, provides for the payment of subsidies (\$1 for \$1 based on all aspects of local government library expenditure) conditional upon a report on the matter by the Libraries Board to the Minister for Local Government. In 1983-84, subsidies amounted to \$5 685 400. The provision of bookstocks and other materials to public libraries operating under this Act is centred in the Public Libraries Division of the Department of Local Government, which also provides a Request and Reference Service to member libraries as a free service, as well as professional assistance to librarians and local authorities. This service includes advice on siting, and on internal planning of library buildings.

In the year ending 30 June 1984 the annual new book provision amounted to 275 446 volumes in addition to 112 752 paperbacks and 39 585 sound recordings. About 51 150 volumes were sent to libraries in answer to requests, from a central pool of 200 000 volumes maintained in the Public Libraries Division.

**Local Public Libraries, South Australia**

Year	Libraries at End of Year	Registered Readers	Books Lent	Stocks at End of Year
1979-80 .....	74	286 000	7 506 000	1 314 000
1980-81 .....	80	347 000	8 779 000	1 354 000
1981-82 .....	90	393 000	9 598 000	1 416 000
1982-83 .....	98	429 000	10 623 000	1 629 000
1983-84 .....	106	445 000	11 297 000	1 760 000

**Institute Libraries**

Institute libraries, which are situated in metropolitan and country areas throughout the State, are largely dependent on members subscriptions and in some cases on income from the institute hall, but they also receive a government subsidy and about two-thirds of them receive support in varying degrees from local councils.

The Institutes Association of South Australia acts as a co-ordinating authority and as a purchasing agency for affiliated institutes; these, however, retain complete autonomy, being governed by a committee elected by members. The conduct of institutes is regulated by the Libraries Act, 1982-1984.

The borrowing facilities of institutes are available to subscribers, and the general public may use the reading facilities in the library. Many institute libraries allow children to borrow books from the library without charge.

**Institute Libraries, South Australia**  
**At 31 December**

Particulars	1980	1981	1982	1983
Number of institutes .....	136	122	108	80
Subscribers .....	28 154	22 628	21 146	19 391
Number of volumes .....	590 050	520 632	472 465	399 603
Volumes circulated during year .....	904 265	894 981	804 261	728 035

The number of institutes is continuing to decline with the expansion of Public Library services and institute libraries are being gradually phased out. This policy is being pursued with the co-operation of the Institutes Association of South Australia.

**Other Libraries**

Particulars relating to the Barr Smith Library at the University of Adelaide, the Flinders University Library and the South Australian Institute of Technology Library are given in Part 6.2. Other libraries include those of the Royal Society of South Australia, specialising in natural history periodicals, the South Australian Branch of the Royal Geographical Society of Australasia and the Parliamentary Library.

**THE PRESS**

The State's first newspaper, *The South Australian Gazette & Colonial Register*, was first printed in London in 1836, six months before colonisation. The second issue of this paper, which served both as the official Government publication and as an unofficial reporter of the news, was produced in Adelaide twelve months later. *The South Australian Gazette* (renamed *The South Australian Government Gazette* in 1840) emerged as a separate organ in 1839 while the newspaper continued as *The Register*, which became the first continuous daily paper.

In the next twenty years several more daily newspapers were introduced, and for many years there were two morning and two evening papers daily. However, since the mid-1920s the present system of three major Adelaide newspapers—one morning daily, one evening daily and one weekend publication—has operated.

*The Advertiser*, published each morning except Sunday, was first issued in 1858 as *The South Australian Advertiser* and absorbed *The Register* in 1931. It is distributed throughout the State, with about seventy-five per cent of its circulation in Adelaide and suburbs and twenty-five per cent in country districts.

*The News*, published each evening from Monday to Friday, was introduced in 1923 replacing two evening newspapers, *The Express & Telegraph* and *The Journal*, which traced back their origins to the 1860s. Eighty per cent of sales of *The News* are in Adelaide and suburbs.

*The Sunday Mail*, printed on Saturday evenings and distributed mainly on Sunday mornings, first appeared under this name in 1955 following a merger between *The Mail*, first printed in 1912, and the *Sunday Advertiser*, which was introduced in 1953. About twenty-five per cent of sales of the *Sunday Mail* are in country districts.

*The Stock Journal*, previously the *Adelaide Stock and Station Journal*, was established in 1904. It is published weekly and provides up-to-date information on stock and wool markets and the technical aspects of farming and property management.

There are at present thirty-one newspapers operating in the State's country areas. Of those still existing, *The Border Watch* (Mount Gambier) in 1861 and *The Bunyip* (Gawler) in 1863 were first to appear. There are district papers printed by Messenger Newspapers Pty Ltd, containing items of local interest, which are circulated in a number of suburbs of Adelaide, as are a number of community newspapers, published on a non-profit basis by committees of local residents.

### RADIO AND TELEVISION BROADCASTING

Radio and television broadcasting falls within the jurisdiction of the Commonwealth Government and is principally governed by the *Australian Broadcasting Corporation Act 1983* and the *Parliamentary Proceedings Broadcasting Act 1967*. Commonwealth bodies which are directly involved with broadcasting include the Department of Communications, the Australian Broadcasting Corporation (ABC), the Australian Broadcasting Tribunal, the Australian Telecommunications Commission (Telecom Australia) and the Special Broadcasting Service (SBS).

In addition to radio and television stations operated by the ABC and the SBS there are commercial radio and television stations operated by companies under licence and public radio stations operated on a non-profit basis by corporations under licence.

The responsibility for the development of the broadcasting system rests mainly with the Minister for Communications. The Minister is responsible, through his Department, for broadcast planning, including all matters relating to the technical operation of stations, and for the investigation of interference to the transmission and reception of programs.

Subject to an inquiry, during which submissions from the public may be considered, the Australian Broadcasting Tribunal is empowered to grant a licence, or to renew, suspend or revoke the licence of any commercial or public station. Licences to operate a commercial or public station are granted to companies by the Tribunal for an initial period of up to five years and licences may be renewed for periods of from one to three years. The initial licence fee is \$500 for a commercial station. No fee is payable for a public station. Subsequent licence fees are assessed annually on a sliding scale using each station's gross earnings in the previous twelve months accounting period as the basis for the calculation.

## RADIO

There are twenty medium frequency Amplitude Modulation stations operating in South Australia. In the metropolitan area there are seven stations and in country areas thirteen stations.

The ABC's Collinswood studios relay a Frequency Modulation (FM) service for 24 hours each day to centres across Australia, including Mount Gambier and Loxton in South Australia. An Adelaide commercial station, and four public stations, also broadcast on the band.

Four public radio stations provide for special-interest groups within the community. They are 5UV (University of Adelaide), 5MMM-FM (Progressive Music Broadcasting Association Incorporated), 5EBI-FM (Ethnic Broadcasters Incorporated) and 5PBA-FM (Para Broadcasters Association Incorporated). One FM public radio station serves the Mount Gambier Community (5GTR-FM, operated by South East Community Access Radio Incorporated).

## TELEVISION

## Television Stations

The Adelaide area is served by one National and three commercial television stations on the Very High Frequency (VHF) band.

## Television Programs

Commercial channels place considerable emphasis on drama and light entertainment, whereas the Australian Broadcasting Corporation covers a wider spectrum. Statistics of Adelaide television programs are shown in the following table.

Composition of Television Programs, All Adelaide Stations, 1983-84

Category	Commercial	National
	Per cent (a)	
Television drama .....	31.5	13.5
Cinema movies .....	15.9	1.7
Light entertainment .....	16.5	12.6
Sport .....	9.3	11.4
News .....	7.2	6.1
Children's .....	7.8	23.1
Family .....	3.3	0.9
Information .....	1.6	7.6
Current affairs .....	5.3	5.4
Politics .....	—	—
Religion .....	1.6	1.5
The arts .....	—	2.8
Education .....	—	13.4
Total .....	100.0	100.0

(a) Percentage of transmission time (6 a.m. to 12 midnight) in each category.

— Less than 0.1 per cent.

In an average hour on commercial television in Adelaide, programs occupy 48 minutes 16 seconds; advertisements occupy 9 minutes 49 seconds and other material, such as program promotions and community service announcements occupy 1 minute 55 seconds. More technical details concerning Radio and Television services can be found in Part 10.5 Communication.

## PARKS AND GARDENS

### National Parks and Wildlife Service

The South Australian National Parks and Wildlife Service operates under the National Parks and Wildlife Act, 1972-1981. The Service is a division of the Department of Environment and Planning and is the main authority responsible for the development of parks and reserves, as well as for the protection of native vegetation and wildlife throughout the State.

Natural areas are set aside to conserve samples of the major plant communities and wildlife habitats of South Australia. At the end of June 1984, 207 reserves had been declared, including ten National Parks, fifteen Recreation Parks, 174 Conservation parks and eight Game Reserves, covering nearly 4.5 million hectares. The Government continued its policy of additions to existing parks, except for the purchase of land for wetland conservation. Dalhousie Station in the far north-east of the State was purchased in 1984. The station has some of the most important mound springs in the State.

Throughout the Service there has been increased activity relating to fire management; reviewing policies, upgrading equipment, preparation of fire management plans for parks, investigation of fire modelling techniques and the construction and maintenance of fire tracks. Replacement of fencing and signs burnt in the Ash Wednesday fires of February 1983 has continued.

On 12 May 1983, regulations were introduced under the Planning Act 1982 to control the clearance of vegetation in the agricultural regions of the State. A large number of applications for clearance have been received.

Management plans are prepared to assist park management. These set out the objectives for a park, identify the outstanding features, wildlife, vegetation and heritage sites and set priorities for work programs. Additional staff have been employed to prepare management plans and during 1983-84 final plans were released for the Flinders Ranges National Park, Island Conservation Parks and Parks of the Murraylands. Management plans were drafted and placed on public exhibition for the following reserves: Belair Recreation Park, Katarapko Game Reserve, Morialta Conservation Park, Port Gawler Conservation Park, Small parks of the Lower South East, parks of the Murray Mallee Region and Conservation parks of Kangaroo Island.

Another major responsibility of the Service is the protection of native plants and animals. This is achieved mainly through the issuing of permits to take, keep and/or sell protected plants and animals. The Service is also responsible for hunting regulations and the setting of hunting seasons and quotas.

Research undertaken within the Service relates to the re-establishment or propagation of threatened and/or endangered plants or animals, the effect of fire on the natural environment and biological surveys of the State's flora and fauna. Two major surveys were undertaken, in the Cooper Creek area in the far north-east of the State, and on the Nullabor Plain. A new study of one of Australia's rarest mammals, the Greater Stick-nest Rat, has commenced.

The Service places a high priority on improving community involvement in park management, particularly through its consultative committees, twelve of which now operate throughout the State. These committees have been established to enable interested groups to formally participate in the planning and care of parks. The community Assistance Projects, which enable organisations to carry out volunteer work in parks, have been supported by interested groups, with sixty projects being undertaken throughout South Australia.

A general description of the vegetation and wildlife of South Australia is included in Part 1.4 Natural Environment.

### Botanic Gardens

The Adelaide Botanic Garden, occupying 18.5 hectares east of the Royal Adelaide Hospital, was established in 1855 and was opened to the public in 1857. Botanic Park, an area of about 30 hectares north of the Garden was acquired in 1866 and has now been developed as an arboretum.

The Garden contains an extensive collection of about 6 000 species of plants. Important features are the collections of native plants from dryland regions, cacti and succulents, the glass ground, glasshouse displays and the wisteria arbours. The Museum of Economic Botany, opened in 1881, houses a comprehensive seed collection, displays of plant products and educational displays. The Tropical House is a fine example of a nineteenth-century conservatory and, along with the Garden's Museum and Main Gates, is listed in the Register of the National Estate.

The State Herbarium, re-established within the Botanic Garden in 1954, presently contains about 400 000 specimens. It is the centre of all significant research on the classification of native flora of South Australia.

The Botanic Garden's Library is the most complete of its type in the State, with numerous rare books, periodicals and archival items.

State-wide advisory services are available on all matters relating to ornamental horticulture. A seconded teacher from the Education Department handles all inquiries from pre-primary to tertiary curricular matters and all visits by school children.

An organisation, The Friends of the Botanic Gardens, was formed in November 1977 and now numbers approximately 700 people. This group organises various activities, ranging from voluntary work in the Garden's library and herbarium to social functions for its members.

Experimental tree plantations have been established at Giles Corner, Lameroo and Stansbury to test hardiness of ornamental woody plants under natural rainfall. New plantations are being developed at Cleve, Hawker, Mount Gambier and Quorn.

In the mid-1960s the Wittunga Garden at Blackwood was donated by the Ashby Family to the Botanic Gardens. This comprises approximately fifteen hectares of Australian and South African plants and was opened officially in September 1975.

Mount Lofty Botanic Garden of approximately ninety-seven hectares was established in 1952. It is devoted to the cultivation of northern and southern hemisphere temperate plants and was opened to the public on 5 November 1977.

The grounds of Government House are maintained by the Botanic Gardens. In 1981 the Board of the Botanic Gardens assumed control of the four hectare heritage garden 'Beechworth' at Stirling, a late nineteenth century *Rhododendron* garden.

### Zoological Gardens

The Royal Zoological Society of South Australia was founded in 1878, and in 1883 approximately eight hectares of Botanic Park were granted to the Society for the establishment of the Zoological Gardens. At the same time arrangements were made for the various exotic and Australian animals and birds previously housed in the Botanic Gardens to be transferred to the Zoological Gardens.

The Zoological Gardens contain an excellent collection of mammals, birds and reptiles. Particular emphasis is given to Australian animals and especially to native Australian birds. During 1983-84, 133 species of mammals, including a large collection of marsupials, and 211 different species of Australian and foreign birds were exhibited.

The many mammals, reptiles and birds are attractively displayed in cages and enclosures; the enclosures for some animals are moated yards freely open to public view. Two

walk-through aviaries, a Children's Zoo, where the animals can be handled and fed, and a nocturnal house for the display of animals which are active during the night, are features of the Gardens.

The revenue necessary for maintaining and developing the Gardens is obtained through an annual State Government grant, from gate receipts and sundry sources.

During 1983-84 about 340 000 persons visited the Zoological Gardens.

### **Municipal Parks and Gardens**

The City of Adelaide is surrounded by 689.4 hectares of parklands, including 136 hectares of gardens, 100 hectares of golf courses and other recreational areas. The development and flexibility of the parklands permits varied usage by the public including equestrian activities, swimming, boating, ball games, picnicking, fetes, Christmas parties, art displays and pop concerts. Most local government authorities maintain parks and gardens.

## **RECREATION AND SPORT**

### **Department of Recreation and Sport**

The Department of Recreation and Sport was established on 11 November 1982 around the nucleus of the former Division of Recreation and Sport. The Department is involved in:

- facility development programs for recreation and sporting facilities,
- equipment grants,
- junior sports coaching scheme, junior country development grants, grants for coaching and training,
- financial assistance towards travel to national sporting events,
- grants for the conduct of sporting championships in SA,
- umpire/referee training grant scheme; coaches development scheme,
- salary subsidy scheme for State sporting administrators/coaches,
- administrator grants for State recreation organisations; Administrators Development Scheme,
- grants for recreation development programs,
- sports injury courses,
- sports administration courses,
- research and planning for recreation and sport,
- providing information on available recreation and sporting opportunities,
- recreation for special groups, including the disabled, elderly, Aborigines and women,
- publicity of vacation recreation programs,
- development and maintenance of walking tracks (including the Heysen Trail),
- development of community physical fitness,
- playground development,
- co-ordination of Government involvement in the development of open space for recreational use,
- administration of residential recreation camps at Mylor, Parnanga and 'Frahn's Farm' at Monarto.

The Department also has responsibility for:

- administering the Regulations under the Lottery and Gaming Act, 1936-1984, pertaining to the licensing of fund raising lotteries in this State. Issuing licences,



- providing information and guidance, and ensuring compliance with the Regulations,
- administering the provisions of the Soccer Football Pools Act, 1981, administering the provisions of the Racing Act, 1976-1984, and to supervise horse racing, trotting and dog racing in South Australia.
- administering collections under the Charitable Purposes Act.

### **Sports Administration Centre**

In May 1978 the State Government established a Sports Administration Centre at Wayville. The Centre has been designed to help alleviate the problems and expenses involved with the administration of sporting organisations. It functions as a house of business and is geared to encourage associations to conduct their management in a more proficient and informative manner. As a collective central point, it allows a more effective communication level to be established with Government authorities and private business groups interested in the promotion of sport.

A restriction of five days per week per sport has been imposed and therefore priority for accommodation is given to the recognised State Associations. If the controlling body does not require the services of the Centre, then affiliated groups, with the approval of the State body, may avail themselves of the services.

### **South Australian Sports Institute**

The Sports Institute was established by the State Government on 1 July 1982 and is located at the Underdale Campus of the SA College of Advanced Education. Its main objective is the promotion of opportunities for selected South Australians with recognised or potential ability to achieve excellence in their chosen sports. The Institute co-ordinates and facilitates training programs and sports science resources. It is also responsible for the education of coaches under the National Coaching Accreditation Scheme.

## **LOTTERIES AND BETTING**

### **LOTTERIES**

The State Lotteries Act, 1966-1984 provides for the promotion and control of lotteries by the Government of the State. A Lotteries Commission consisting of a chairman and two other members was appointed to administer the Act with the first draw being made on 29 May 1967.

In accordance with Section 16 of the Act all money received by the Commission is paid into a Lotteries Fund from which money is made available to meet the expenses of the Commission and to pay prizes. The balance of the Lotteries Fund, which represents the surplus of income over expenditure and prize money not claimed for over six months, is transferred to the Hospitals Fund.

Up to 31 December 1984, \$487.4 million was received from the sale of tickets, including X Lotto and Instant Money Game, of which \$295.8 million was distributed in prize money, and approximately \$157.3 million transferred to the Hospitals Fund.

In April 1973, a new type of lottery called 'X Lotto' (Cross Lotto) was introduced. In February 1981 X Lotto was replaced by the Australian Lotto Bloc with X Lotto as a partner. In October 1983 Midweek Lotto was introduced as part of the Australian Lotto Bloc. For the year ending 31 December 1984, \$47.8 million was invested in X Lotto while sales of Instant Money tickets totalled \$29.2 million.

At 31 December 1984 there were 309 Lotteries Commission Agents in South Australia, of which 220 were in the Adelaide and suburban areas and 89 in country areas.

## BETTING

Legalised betting in South Australia is restricted to horse racing, trotting, greyhound racing, coursing and foot racing. Since 1 January 1977 it has been governed by the provisions of the Racing Act, 1976-1985. The Act makes provision for betting with the totalisator and with bookmakers at horse race, trotting and greyhound race meetings.

**Betting: Amounts Invested with Bookmakers and On-Course Totalisators and Distribution of Commissions, Taxes and Fractions, South Australia**

Particulars	1980-81	1981-82	1982-83	1983-84
Amount invested:	\$'000			
Bookmakers;				
Horse racing .....	118 825	119 110	124 719	143 916
Trotting .....	28 062	29 808	29 477	35 747
Greyhound racing, coursing and foot racing .....	26 488	25 882	24 232	29 069
Total .....	173 375	174 800	178 428	208 732
Totalisator;				
Horse racing .....	14 450	18 557	23 600	29 748
Trotting .....	3 173	3 208	4 868	6 839
Greyhound racing, coursing and foot racing .....	2 810	2 852	4 032	5 661
Total .....	20 433	24 617	32 500	42 248
<b>Total amount invested .....</b>	<b>193 808</b>	<b>199 417</b>	<b>210 928</b>	<b>250 980</b>
Distribution of commissions, taxes and fractions derived from betting transactions:	\$'000			
State Government;				
Bookmakers,				
Commission on bets .....	1 942	1 961	1 948	1 853
Duty on betting tickets .....	(a) 58	—	—	—
Unclaimed bets .....	151	162	164	149
Totalisator,				
Tax .....	849	917	1 267	1 717
Total paid to Consolidated Revenue .....	3 000	3 040	3 379	3 719
Clubs;				
Bookmakers,				
Commission on bets .....	2 117	2 384	2 437	2 835
Totalisator,				
Commission on takings .....	2 226	2 825	3 719	4 818
Fractions .....	180	213	247	307
Total payable to clubs .....	4 523	5 422	6 403	7 960
Racecourses Development Board;				
Commission on Totalisator takings .....	52	73	114	169
Hospitals Fund;				
Totalisator unclaimed dividends .....	120	101	127	140
<b>Total distribution .....</b>	<b>7 695</b>	<b>8 636</b>	<b>10 023</b>	<b>11 988</b>

(a) Amending legislation effective from 28 December 1980 abolished duty on betting tickets.

**Totalizator Agency Board (TAB)**

In October 1966 provision was made for the setting up of the Totalizator Agency system of 'off-course' betting, and agencies have since been established in the metropolitan area and at numerous country towns. A Board consisting of an independent Government appointed Chairman and Deputy Chairman, plus a representative from the controlling body of each of the three codes of galloping, trotting and greyhounds, administers and regulates 'off-course' betting. The TAB first operated on 29 March 1967 on a country race meeting and the first time on a metropolitan meeting on 1 April 1967.

At 30 June 1984, 167 agencies were operating in the city, suburbs and country towns. Of these, fifty-three were sub-agencies operated in conjunction with other businesses. In addition, a system of telephone betting is available to persons who have established accounts with the TAB. In November 1981 the telephone betting system was upgraded to allow account holders anywhere in the State to place bets for the cost of a local telephone call. The introduction of computerised on-line betting in metropolitan and country agencies and sub-agencies was completed by August 1982. At 30 June 1984 the Board employed 184 permanent and 348 part-time staff.

For the year ended 30 June 1984 off-course investments totalled \$193 187 392 of which approximately 83 per cent was payable as dividends. The following amounts became payable to the South Australian Government (to be paid into the Hospitals Fund at the State Treasury) from the operations of the Board during that year:

	\$
Share of profit .....	8 173 000
Fractions .....	757 392
Unclaimed dividends .....	228 297
	<hr/> 9 158 689

To 31 December 1980 the South Australian Government received 5.25 per cent of all investments. However, from 1 January 1981 the TAB retained all commission deducted from investments, paying 50 per cent of its net profit to the Government and the remaining 50 per cent to the codes.

For the year ended 30 June 1984, an amount of \$8 173 000 was available for distribution to galloping, trotting and greyhound clubs under a scheme of distribution prepared by the Controlling authorities for each code and approved by the Minister for Recreation and Sport. From 1 August 1982, fifty per cent of unclaimed dividends and fractions (formerly wholly paid to the government) were allocated to the Racecourses Development Fund for the benefit of the codes. Since commencing operations in 1967 the Board has distributed a total of \$43 740 850 to participating clubs while in the same period, the South Australian Government has received \$78 285 305.

**Racecourses Development Board**

The Racecourses Development Board, established under the Lottery and Gaming Act, 1936-1984 and continued under the Racing Act, 1976-1985, administers the Horse Racing Grounds Development Fund, the Trotting Grounds Development Fund and the Dog Racing Grounds Development Fund. These funds are financed by a proportion of investments on totalisators conducted by racing clubs or the Totalizator Agency Board and are to be applied by way of grants or loans to racing clubs for providing, erecting, improving or repairing public facilities at racecourses and also for stakemoney. The Board is empowered also to borrow funds for these purposes.

## SPORTING FACILITIES

The parklands surrounding the City of Adelaide provide many outdoor venues for sporting events. The more important facilities include Adelaide Oval, Memorial Drive, Victoria Park Racecourse, North Adelaide Golf Links and the Adelaide Swimming Centre. There are also a large number of playing fields which may be leased by sporting clubs or associations, or hired on an individual basis.

Throughout the metropolitan area there are a number of ovals and other facilities which are either owned by sporting bodies or leased from local councils. Among the more notable is Football Park which has a seating capacity in excess of 50 000. Sports areas are also located at most government and non-government schools and in many cases these are made available for public use.

There are several stadia and multi-purpose complexes in the suburbs which are used for sporting and other activities. There are also a number of privately owned centres which provide sporting and physical fitness services.

Most country towns have ovals and other sporting facilities, and indoor complexes have been built at several locations.

## 6.5 HEALTH

### THE AUSTRALIAN HEALTH SCHEME

#### Medicare

On 1 February 1984 the Commonwealth government introduced the new universal health scheme known as Medicare. The financing arrangements under the Medicare program feature the following major elements:

- (i) automatic entitlement under a single public health fund to medical and optometrical benefits of 85 per cent of the Medical Benefits Schedule fee, with a maximum patient payment for any service of \$10 where the Schedule fee is charged;
- (ii) access without direct charge to public hospital accommodation and to in-patient and outpatient treatment by doctors appointed by the hospital;
- (iii) the restoration of funds for community health to approximately the same real level as 1975;
- (iv) the reduction in charges for private treatment in shared wards of public hospitals to \$80 a day; and
- (v) increases in the daily bed subsidy payable to private hospitals to an average of \$30.

The Medicare program is financed in part by a one per cent levy on taxable incomes, with low income cut-off points. The tax rebate formerly paid for basic health insurance contributions ceased from 30 June 1983. In addition, the Commonwealth's annual contribution to the Health Benefits Reinsurance Trust Fund was reduced from \$100 million to \$20 million from 1 July 1983. Under the provisions of the *National Health Act 1953*, the Commonwealth Government subsidises registered health insurance organisations by contributing to the Reinsurance Trust Fund for payments of benefits to patients with hospital treatment in excess of thirty-five days.

To facilitate the introduction of the Medicare program amendments were necessary to the following Commonwealth legislation:

- *National Health Act 1953*;
- *Health Insurance Act 1973*;
- *Health Insurance Commission Act 1973*; and
- *States (Tax Sharing and Health Grants) Act 1981*

and certain tax-related legislation.

### *The Levy*

The concept of a one per cent levy on all taxable incomes reflects the policy that health care should be related to the individual's ability to pay. From 1 July 1984 no levy is payable by single people earning \$7 110 per annum or less or by married couples and sole parents with a combined income of \$11 803 per annum or less, with a further \$1 330 per annum allowed for each dependent child. There is also a maximum levy payable. With effect from 1 November 1984 this is reached at a single or combined husband and wife taxable income of \$75 000 per annum or \$1 442 per week. Originally the low income cut-off points were set at levels estimated by the Department of Social Security; this had the effect of freeing from the levy income-tested holders of a Pensioner Health Benefits Card/Health Benefits Card or Health Care Card who were cardholders for the whole of 1983-84.

The legislation also includes a shading-in provision the effect of which is that in circumstances where taxable income marginally exceeds the minimum limit the levy payable will be less than 1 per cent.

### *Eligibility for Medicare Benefits*

Medicare benefits are available to all persons ordinarily resident in Australia with the exception of members of foreign diplomatic missions and their dependants.

Eligible persons include:

- all permanent Australian residents (including Repatriation beneficiaries and Defence Force Personnel);
- persons visiting Australia who obtain approval to stay for more than six months—with eligibility to date from arrival in Australia;
- persons visiting Australia who originally obtain approval to stay less than six months, but are granted an extension which makes the total approved stay more than six months—with eligibility to date from when the extension was granted;
- foreign students who are undertaking courses in Australia for six months or less;
- persons visiting Australia who are residents of countries with whom Australia has a reciprocal health care agreement;
- Australian residents receiving medical services while travelling overseas.

Short-term visitors to Australia (for six months or less) are responsible for the full cost of their medical and hospital treatment. Such persons should therefore make some form of private insurance arrangements to cover such costs.

### *Medical Benefits*

The *Health Insurance Act 1973* provides for a Medical Benefits Schedule which lists medical services and the Schedule (standard) fee applicable in each State in respect of each medical service. The Schedule covers services attracting Medicare Benefits rendered by legally qualified medical practitioners, certain prescribed medical services rendered by approved dentists in the operating theatres of approved hospitals, and

optometrical consultations by participating optometrists. Schedule fees are set and updated by an independent fees tribunal which is appointed by the Government. The fees so determined are to apply for Medicare benefits purposes. Medical services in Australia are generally delivered either by private medical practitioners on a fee-for-service basis, or by medical practitioners employed in hospitals.

Where a medical service is provided by a private medical practitioner on a fee-for-service basis, Medicare refunds 85 per cent of the Medical Benefits Schedule fee cost or, the Schedule fee less \$10, whichever is the greater. It is not possible to insure with private health insurance organisations to cover the 15 per cent 'gap'. However, should an individual accumulate 'gap' payments of \$150 in a year, Medicare will pay benefits at 100 per cent of the Schedule fee for each service for the remainder of the year.

Under Medicare, medical practitioners are able to direct bill for any patient. In such cases, they receive the Medicare benefit as full payment. Previously, direct billing was limited to services rendered to eligible Pensioner Health Benefit and Health Care Cardholders, and their dependants.

Medicare medical benefits are administered by the Health Insurance Commission.

### *Hospital Care*

From 1 February 1984, access to public hospital out-patient, and inpatient accommodation in a shared ward with treatment by a doctor employed by a hospital, is available without direct charge. The Scheme does not cover hospital charges raised for treatment as a private patient in a public hospital, (where patients elect to be treated by their own doctor), nor does it cover private hospital charges. It is possible however for persons to take out insurance with private health funds to cover these situations.

### *Long Term Nursing Home Type Patients in Hospital*

Patients accommodated in acute hospitals for more than thirty-five continuous days (including breaks of not more than seven days) are automatically classified as nursing home type patients, unless their doctor certifies in accordance with section 3B of the Health Insurance Act that such patients are in need of acute care.

Nursing home type patients in public hospitals, who are insured with a health benefits fund receive a lower level of basic health insurance benefit and are required to pay a statutory minimum (uninsurable) patient contribution, the same as for patients accommodated in nursing homes. Uninsured nursing home type patients in public hospitals are ordinarily required to pay the statutory minimum patient contribution. For nursing home type patients in private hospitals, the basic level of insurance benefit is reduced to a prescribed amount and an uninsurable patient contribution is charged.

To guard against abuses in relation to the issuing of certificates under section 3B of the *Health Insurance Act*, a review process in the form of Acute Care Advisory Committees has been established. These Committees adjudicate in disputes involving the appropriateness of acute care certification and recommend whether certificates issued ought to be varied or revoked.

### *Private Hospital Categorisation*

Since 1 February 1984 both the Commonwealth bed day subsidy and the basic hospital insurance benefit for private hospital accommodation have been paid according to a system of classification in three categories:

- Category 1 hospitals receive a \$120 basic private fund benefit and a \$40 Commonwealth daily bed subsidy;

- Category 2 hospitals receive a \$100 basic private fund benefit and a \$30 Commonwealth daily bed subsidy; and
- Category 3 hospitals receive an \$80 basic private fund benefit and a \$20 Commonwealth daily bed subsidy.

Private hospitals are classified into the three categories according to the services and facilities provided. Those hospitals with more sophisticated services and facilities attract a higher level of basic insurance benefit and Commonwealth bed day subsidy.

### **Financing**

Medicare is financed partly by the levy, with the Commonwealth Government providing supplementary finance.

#### *General Revenue Grants*

The Commonwealth provides untied identifiable health grants within general revenue grants to the States and the Northern Territory as a contribution towards the cost of health programs. These arrangements which are authorised by the *States (Tax Sharing and Health Grants) Act 1981* are designed to replace previous specific purpose health payments for public hospital operating costs (under expired Hospital Cost Sharing Agreements), community health and school dental service programs and apply fully to all States.

#### *Medicare Grants to the States*

Under the Medicare program, all States, the Northern Territory and the Australian Capital Territory, have been compensated by Medicare grants outside the identified health grants and tax sharing arrangements for:

- revenue losses and additional medical costs directly attributable to the provision of free public hospital accommodation and treatment; and
- a reduction to \$80 per day in the fee charged for those persons who seek 'doctor of choice' in public hospitals.

As part of the Medicare arrangements, the Commonwealth terminated the hospital cost sharing agreements with South Australia and Tasmania on 31 January 1984 and these States have since been funded on the same basis as other States. Commonwealth hospital payments to both States in 1983-84 have therefore comprised:

- specific purpose assistance (hospital cost sharing agreements) for the period 1 July 1983 to 31 January 1984;
- since 1 February 1984, an additional component to their existing identified health grants (in respect of the community health program and school dental scheme) equal to the amount of grants they would otherwise have received had the cost sharing agreements continued; and
- since 1 February 1984, additional Medicare grants as outlined above.

The Medicare grants to the States and Northern Territory also include an additional community health component to restore the level of Community Health Grants to 1975-76 levels in real terms.

### **Health Program Grants**

Health program grants are lump sum payments to approved organisations in respect of the cost incurred by those organisations in providing approved health services. The grants were first introduced in July 1975 with the intention of establishing a scheme for

funding a wide range of health services on other than a fee-for-service basis. The scheme underwent several modifications in later years to allow for the provision of charges to be imposed, where appropriate, for services rendered to privately insured patients.

Since 1 February 1984 there has been a return to the original concept of health program grants in that they now cover the entire costs incurred by approved health services, and no charges are raised for those services.

### **Community Health Program—National Projects**

Under the Community Health Program National Projects arrangements, the Commonwealth provides funding to organisations in respect of specific activity which has been approved for the purpose of the Program.

The largest of these projects is the Family Medicine Program (FMP) of the Royal Australian College of General Practitioners, which provides vocational training for young doctors who intend to enter general practice. The trainees receive their training through attachments to participating private general practitioner practices and by attendance at educational events organised by the FMP.

The other national projects are either national co-ordinating secretariats of voluntary non-profit organisations operating in more than one State or specific health-related projects which have national application.

Under the Medicare arrangements which commenced on 1 February 1984, the Commonwealth government expressed a renewed interest in community health services and provided block grants to the States and Territories amounting to an additional \$7.3 million in 1983-84 for new and expanded community health services within their borders. For new projects at the national level, the Government also provided a further \$0.8m in 1983-84.

### **Program of Aids for Disabled People**

The principal aim of the Program of Aids for Disabled People (PADP) is to enable people with disabilities of a permanent or indefinite duration to live more independently in a domestic situation, with a consequent reduction in demand for more costly institutional care. Under the program, certain aids to daily living including wheelchairs, surgical shoes, braces, splints, calipers, surgical wigs, aids for incontinence, walking aids, personal aids (eating and cooking utensils, toilet articles) and basic home modifications (ramps, rails, grips, door widenings, etc. may be provided to eligible people. PADP, which is wholly funded through the Commonwealth, is operated through health services networks administered by the State and Territory health authorities.

### **The Australian Health Services Council**

A national council, the Australian Health Services Council, together with bilateral Commonwealth/State Health Committees were established under the Medicare Agreements between the Commonwealth and the States. These Committees and the Council report to the respective Health Ministers and provide advice primarily on policy matters, but also on administrative and financial arrangements.

The Committees also consider adjustments to Commonwealth or State health programs that may be in their mutual interests and agree to appropriate alterations in payments to the States for consideration by the Health Ministers.

### **Pharmaceutical Benefits Scheme**

Under the Pharmaceutical Benefits Scheme, assistance is provided towards the cost of a comprehensive range of drugs and medicines to persons receiving treatment from a medical practitioner. From 1 April 1979, the Scheme was expanded to allow approved



participating dental practitioners to prescribe a limited range of drugs for dental treatment of their patients. The drugs and medicines are supplied by an approved chemist upon presentation of a prescription from the patient's medical or dental practitioner, or by an approved hospital to patients receiving treatment at the hospital.

From 1 January 1983 new patient contribution arrangements are applicable as follows:

- (a) *free of charge*—pensioners with Pensioner Health Benefits (PHB) cards and their dependants continue to receive benefit items free of charge;
- (b) *\$2 per benefit item*—people in special need who hold Health Care cards and their dependants and those Social Security pensioners and Veterans' Affairs service pensioners who do not hold a PHB card and their dependants, pay a reduced contribution of \$2 per benefit item;
- (c) *\$4 per benefit item*—all other people pay an increased contribution of \$4 per benefit item.

### **Commonwealth Nursing Home Benefits**

There are two forms of Commonwealth benefit payable in respect of patients accommodated in premises approved as nursing homes under the National Health Act. They are:

(a) **Basic Nursing Home Benefit**

The Commonwealth pays basic nursing home benefits in respect of all qualified nursing home patients other than those who are entitled to damages or compensation. Basic benefit levels are reviewed and adjusted annually in each State to a level whereby the fees charged in respect of 70 per cent of beds in non-Government nursing homes, approved under the National Health Act, (participating nursing homes) are covered by the sum of the benefit plus statutory minimum patient contribution. As at 1 November 1984, the maximum amount of basic nursing home benefit payable in South Australia was \$39.05 per day.

(b) **Commonwealth Extensive Care Benefit**

The Commonwealth extensive care benefit is payable at the rate of \$6 a day, in addition to the Commonwealth basic benefit, in respect of patients who need and receive 'extensive care' as defined in the National Health Act. Application must be made for payment of the extensive care benefit and as in the case of the Commonwealth basic benefit, it is only payable in respect of the qualified patients who are not entitled to damages or compensation.

### *Minimum Patient Contribution*

All participating nursing home patients are normally required to make a statutory minimum contribution towards the cost of their accommodation in the nursing home. Patients are required to make this contribution towards the cost of their accommodation and care in recognition of those costs which would otherwise be incurred outside the nursing home in any alternative long-term residence.

The statutory minimum patient contribution is calculated as a proportion of the sum of the standard single rate pension plus the supplementary assistance, and at 1 November 1984 was \$12.75 a day. Where the fees charged by a participating nursing home are in excess of the combined total of nursing home benefits and the statutory minimum patient contribution, the difference must be met by the patient. Conversely, where the nursing home fee is less than this combined total, the basic benefit paid by the Commonwealth is reduced by that amount.

Fees charged to patients in Government nursing homes are determined by State

Governments. Patients in these homes also attract basic and extensive care benefits from the Commonwealth Government, and the patient contribution is usually about the same as the statutory minimum patient contribution.

#### *Deficit Financing Arrangements*

As an alternative to the provision of Commonwealth nursing home benefits under the *National Health Act* the *Nursing Homes Assistance Act 1974* provides for direct funding of nursing homes conducted by local government, charitable and benevolent organisations.

Under the deficit financing arrangements the Commonwealth meets the approved operating deficits and the cost of approved asset replacements of these nursing homes. Financial assistance is provided by way of monthly advances based on a budget approved by the Commonwealth Department of Health. An annual settlement is effected when audited financial statements are forwarded to the Department.

Nursing homes wishing to participate in the deficit financing arrangements must enter into a formal agreement with the Commonwealth Government for that purpose. Patients in deficit-financed nursing homes are required to pay a prescribed fee equivalent to the statutory minimum patient contribution, although provision exists to reduce this contribution in appropriate cases such as homes caring for children. Higher fees are prescribed for patients entitled to damages or compensation.

#### *Domiciliary Nursing Care Benefit*

The Commonwealth Government provides a domiciliary nursing care benefit to assist people who choose to care, in their own homes, for chronically ill or infirm relatives who would otherwise require admission to a nursing home. Patients who qualify for this benefit are those people who are incapable of caring for themselves and of being left unsupervised for any significant period.

The basic criteria for the payment of the benefit are that the patient must be aged 16 years or over and be in need of and in receipt of continuing care, and also be receiving regular visits by a registered nurse. The benefit is payable at the rate of \$42 per fortnight.

#### *Home Nursing Subsidy Scheme*

The Scheme was introduced in 1956 to encourage the growth and development of home nursing services in Australia. The subsidy is paid in respect of each eligible nurse employed. An organisation must be a non-profit service to be eligible for the subsidy.

It is a condition of subsidy that the State and/or local government provide at least matching assistance. If they pay less the Commonwealth subsidy is reduced accordingly.

#### *Private Insurance*

Private health funds registered under the *National Health Act* offer cover for treatment as a private patient in a public hospital, private hospital accommodation and ancillary health services.

The accommodation charge for treatment as a private patient in a shared ward of a public hospital is \$80 a day. Basic private fund benefits offered by the registered health funds cover the accommodation charge of \$80 a day for private treatment in a public hospital as well as being structured at three distinct levels to cover the categorisations for private hospitals.

Registered health funds offer supplementary benefits in respect of charges for single room accommodation in public hospitals and for higher cost accommodation in private hospitals to complement the basic private fund benefits.

Ancillary benefits offered by the health funds cover services such as theatre fees, labour ward charges, dentistry, physiotherapy, home nursing, chiropractic and chiropody as well as costs of some aids and appliances. Registered health funds may also offer medical and hospital benefits to cover short term visitors to Australia not covered by Medicare.

All health funds registered under the National Health Act offer insurance in accordance with the community rating principle that everyone pays the same contribution rate regardless of age, sex, family size or medical condition. Single persons pay half the family rate. Registered health funds are non-profit organisations.

The South Australian Health Commission was established on 1 July 1978, following the amalgamation of the Hospitals Department and the Department of Public Health, to allow better rationalisation and co-ordination of the State's health services.

The Commission's Central Office is organised into three Sector Offices based on geographical areas, a Public Health Services Division and a Corporate Office. The three Sector Offices enable greater attention to be given to the needs of the health units. The Executive Directors in charge of Sector Offices are responsible for all matters related to the organisation and delivery of health services within their Sectors.

The Corporate Office is responsible for the Commission's broader and longer-term policy development, planning, co-ordinating and financing decisions. This involves liaison with the health system as a whole, other State Government departments and other levels of Government.

The Commission also embraces the activities of the Central Board of Health, the Occupational Health and Radiation Control Branch, the Communicable Diseases Control Unit, Central Cancer Registry, Health Surveying Services, Health Promotion Services, Mental Health Services, the Food and Drugs Advisory Committee, the Radiation Advisory Committee and the Clean Air Committee.

Four special State-wide health services are provided by organisations incorporated under the South Australian Health Commission Act. They are the Child, Adolescent and Family Health Service; the Intellectually Disabled Services Council; the Aboriginal Health Organisation; and the South Australian Dental Service.

The Central Board of Health administers the Health, Food and Drugs, Narcotic and Psychotropic Drugs, Noxious Trades and the Bakehouses Registration Acts. The Board also has responsibilities under the Local Government Act, the Cremation Act and the Clean Air Regulations.

The Health Act and Food and Drugs Act constitute for every municipal or district council a local board of health for its area. In the metropolitan area, the Metropolitan County Board, representing twenty corporations, is the local authority under the Food and Drugs Act. The Central Board of Health acts as a supervisory body over all the 127 local boards under the Health Act, the Food and Drugs Act and the Bakehouse Registration Act. It has concurrent jurisdiction with local boards. Outside the boundaries of local boards, the Central Board is the administering authority. A detailed historical summary of health services was included on pages 241-242 of the *South Australian Year Book* 1984.

#### STATE AUTHORITIES EXPENDITURE ON PUBLIC HEALTH

The following table shows the net expenditure by State Authorities from Consolidated Revenue Account on various aspects of health, excluding expenditure on sewerage, drainage and water supply. The figures include both the cost of maintaining State Authorities activities and subsidies paid to other organisations active in this field. For further details see Part 11.3 State Government Finance.

## State Authorities: Outlay on Health, South Australia

Purpose	1978-79	1979-80	1980-81	1981-82	1982-83
	(\$ million)				
General hospitals:					
Final consumption expenditure;					
Gross current expenditure .....	255.9	269.4	307.9	338.5	377.3
Offsetting receipts from patient fees etc. ....	59.7	63.6	63.1	78.8	99.1
Gross fixed capital expenditure .....	28.9	19.6	17.4	18.2	15.9
Other .....	0.1	0.1	0.6	0.2	—
Mental health institutions .....	26.7	27.5	33.9	33.8	36.0
Nursing homes .....	2.6	1.6	2.3	2.4	2.8
Hospital and other institutional services <i>n.e.c.</i> .....	5.6	6.0	6.4	7.7	8.5
Total hospital and institutional services .....	260.3	260.6	305.2	322.1	341.2
Medical and dental clinics and practitioners .....	6.2	7.2	7.6	(b) 16.8	27.9
Ambulance services .....	1.7	1.9	2.5	2.9	3.8
Other clinic and non-institutional services <i>n.e.c.</i> .....	9.1	10.2	11.1	9.2	9.8
Total clinic and non-institutional services .....	17.0	19.3	21.1	28.9	41.5
School health services .....	7.9	8.4	9.0	7.3	8.7
Public health <i>n.e.c.</i> .....	5.9	6.0	8.3	11.1	14.3
Health research and health <i>n.e.c.</i> ....	7.9	7.9	8.3	9.2	10.1
Total other health .....	21.7	22.3	25.6	27.6	33.1
<b>Total .....</b>	<b>299.0</b>	<b>302.2</b>	<b>352.0</b>	<b>378.6</b>	<b>415.8</b>

(a) Details shown are net of charges for services supplied.

(b) From 1981-82 includes the Child, Adolescent and Family Health Service whose components in previous years were shown against other programs, *e.g.* school health services.

## GENERAL HOSPITAL SERVICES

The control of hospitals in South Australia is vested in several authorities including the South Australian Health Commission, the Department of Veterans' Affairs, religious and charitable organisations, local community committees and private owners.

## Recognised Hospitals

Recognised hospitals (formerly public hospitals) are those which have been approved under the Hospital Agreement between the State Government and the Commonwealth. This agreement was subsequently renegotiated, with some amendments, effective from 1 October 1976. They are deficit financed by the State Government; the Commonwealth has agreed to meet up to 50 per cent of net operating costs in accordance with an agreed budget.

The five teaching hospitals and the former country Government hospitals, along with five former non-government hospitals, were incorporated under the South Australian Health Commission Act at 30 June 1980. Each has its own board of management.

In addition there are sixty recognised hospitals in country areas and three (including Queen Victoria Hospital) in the metropolitan area, conducted by local boards of management, which are deficit financed by the State Government and supervised by the South Australian Health Commission.

The following table details State Government expenditure on hospitals.

### Recognised Hospitals, South Australia

Particulars	1979-80	1980-81	1981-82	1982-83	1983-84
Hospitals .....	81	81	81	81	81
Staff (at end of year):					
Medical;					
Salaried .....	808	807	815	838	840
Sessional (a) .....	140	133	149	152	155
Nursing .....	7 461	7 557	7 220	7 326	7 294
Other .....	6 804	6 719	6 983	7 224	6 942
Total .....	15 213	15 216	15 167	15 540	15 231
Patients:					
Admitted .....	220 138	228 593	222 319	237 625	249 572
Average daily number resident ....	4 394	4 534	4 452	4 362	4 360
			\$'000		
Operating receipts:					
State Government aid .....	108 692	128 148	134 132	149 841	155 340
Commonwealth Government .....	108 692	128 148	134 132	149 841	179 279
Fees .....	48 687	47 209	71 625	90 843	77 573
Other .....	4 110	4 215	4 314	4 028	4 900
Total .....	270 181	307 720	344 203	394 553	417 092
Operating payments:					
Salaries and wages .....	195 395	221 529	252 135	286 546	308 972
Other .....	74 786	86 191	92 068	108 007	108 120
Total .....	270 181	307 720	344 203	394 553	417 092
Capital payments:					
Buildings, equipment etc.;					
Government .....	10 238	17 840	12 917	7 586	14 028
Other .....	6 018		8 364	8 186	7 209
Total .....	16 256	17 840	21 281	15 772	21 237

(a) Includes visiting staff paid on a sessional basis and honorary consultants, but not those paid on a modified fee for service basis.

### Teaching Hospitals: South Australia, 1983-84

Particulars	Royal Adelaide Hospital	Queen Elizabeth Hospital	Adelaide Childrens Hospital	Flinders Medical Centre	Queen Victoria Hospital
Staff (at end of year):					
Medical;					
Salaried .....	260	180	106	192	16
Sessional (a) .....	49	33	23	23	5
Nursing .....	1 661	1 070	469	824	315
Other .....	1 615	1 236	716	999	203

**Teaching Hospitals: South Australia, 1983-84 (continued)**

Particulars	Royal Adelaide Hospital	Queen Elizabeth Hospital	Adelaide Childrens Hospital	Flinders Medical Centre	Queen Victoria Hospital
In-patients (b) :					
Admitted and re-admitted .....	40 606	33 350	17 650	31 621	9 642
Average daily number resident	858	519	186	448	145

(a) Includes visiting staff paid on a sessional basis and honorary consultants, but not those paid on a modified fee for service basis.

(b) Includes 'same day' patients.

**Repatriation Hospitals**

The Department of Veterans' Affairs maintains the Repatriation General Hospital at Daw Park. It was built as a military hospital during the 1939-45 War, and came under the control of the Department in 1947. Medical, surgical and psychiatric in-patient and out-patient treatment is provided for eligible ex-service personnel, eligible dependants, serving members of the forces and, under certain conditions, for non-eligible ex-service personnel and civilians.

In 1974 the Daw Park Private Hospital adjacent to the Repatriation General Hospital was acquired and developed as a Rehabilitation Centre and Day Hospital. Within the Hospital's grounds is the Repatriation Artificial Limb and Appliance Centre which manufactures and supplies artificial limbs and other aids free of charge to all persons who require them, regardless of whether they have a Repatriation entitlement or not. The average daily number of patients in the Repatriation General Hospital during 1983-84 was 221. At June 1984 there were 775 full-time staff, 96 part-time staff and 266 beds.

**Other Hospitals and Nursing Homes**

There are several large private hospitals in the metropolitan area including Calvary Hospital, the Memorial Hospital and St Andrew's Hospital, all of which are run by denominational bodies. The Julia Farr Centre at Fullarton provides accommodation and nursing attention for persons suffering from chronic disease. The day-to-day management of the Centre is conducted by the South Australian Health Commission.

Details of all private institutions approved for payment of Commonwealth Government hospital or nursing home benefits are given in the following table.

**Other Hospitals and Nursing Homes, South Australia**

Particulars	1979-80	1980-81	1981-82	1982-83	1983-84
Number of hospitals .....	37	36	37	37	37
Number of nursing homes .....	129	137	147	150	158
Number of beds at end of year:					
Hospitals .....	2 083	2 073	2 038	2 042	2 082
Nursing homes .....	5 146	5 444	6 854	7 031	7 376

**MENTAL HEALTH SERVICES**

The integration of mental health services with the general health system continued in 1983-84. The boards of management of the two psychiatric hospitals report directly to the Sector Offices of the South Australian Health Commission on the same basis as their general hospital counterparts. Under the Mental Health Act no distinction is made in the type of admission to any approved hospital, whether this be to a specified psychiatric

hospital (Glenside Hospital or Hillcrest Hospital) or to a psychiatric unit of a specified general hospital (Royal Adelaide Hospital, the Queen Elizabeth Hospital, Modbury Hospital or the Flinders Medical Centre). To facilitate professional interchange, additional numbers of joint appointments have been made between the psychiatric hospitals and the general hospitals.

Closer relationships have been established between the psychiatric hospitals and the community mental health clinics and services. The work of the three community clinics (Carramar, Beaufort and St Corantyn Clinics) has increased in volume and scope with higher numbers of out-patient and day-patient attendances. Liaison is maintained between the child and adolescent psychiatric units at the Adelaide Children's Hospital, the Flinders Medical Centre and the Child, Adolescent and Family Health Service.

The separation of services for the intellectually handicapped from services for the mentally ill is well established in South Australia. The incorporation of the Intellectually Disabled Services Council took effect on 1 July 1982 and the Council undertook the planning and monitoring of services for those with intellectual handicaps. Additional funds have been provided for new community extensions in the form of group homes and professional support services. Strathmont Centre, formerly categorised as a government psychiatric institution, now forms part of the services of the Intellectually Disabled Services Council.

#### Government Psychiatric Institutions, South Australia

Particulars	1979-80	1980-81(a)	1981-82	1982-83(b)	1983-84
In-patients:					
Admitted and re-admitted ...	4 470	6 279	6 790	5 867	6 084
Discharged .....	4 339	6 246	6 824	5 894	6 089
Deaths during year .....	111	73	71	40	48
Remaining at end of year .....	1 711	1 679	1 574	844	773

(a) From 1980-81 data has been processed manually and show discrepancies with the data from earlier years.

(b) From 1982-83 excludes Strathmont Centre.

#### COMMUNITY AND PUBLIC HEALTH SERVICES

##### Drug and Alcohol Services Council

The treatment of those addicted to alcohol and other drugs in South Australia is the responsibility of the Drug and Alcohol Services Council. The Council controls the following facilities for the treatment of alcohol dependence syndrome and other addictions:

Administrative Headquarters and Information Centre—Parkside;

Driver Assessment Clinic—North Adelaide;

Elura Clinic, North Adelaide—assessment clinic and out-patients centre;

Osmond Terrace Clinic, Norwood—a 'sobering up' and observation unit for patients from all areas;

Family Living Centre, Joslin—a residential therapeutic community for drug dependent persons;

Osmond Terrace Drug Dependence Clinic, Norwood—assessment and treatment of patients addicted to narcotics.

An alcohol dependence syndrome treatment service is also provided by the Council to

patients at the Flinders Medical Centre. In the country, the Council conducts clinics at Whyalla, Port Augusta, Port Pirie, the Riverland, Naracoorte, Mount Gambier, Port Lincoln, Murray Bridge and the Barossa Valley.

The efforts and operations of various church and voluntary organisations are co-ordinated by the Council. These organisations are assisted financially by the South Australian Government.

Education on the various aspects of dependency is undertaken by a number of helping professionals both at undergraduate and graduate level.

#### **Domiciliary Care Program**

The Domiciliary Care Program, established in 1971 and funded jointly by the State and Commonwealth Governments, provides health support services at home so that the recipient is able to live in a domiciliary situation where frequently the only previous alternative would have been institutional care. This concept was greatly expanded in 1973-74 by the addition of the Community Health Program which provided for a wider range of community health services not necessarily of a domiciliary nature.

With the introduction of the Hospital Program from 1 July 1975, there has been a rationalisation of community health services, so that existing hospital facilities may be used, where appropriate, in lieu of the provision of separate facilities or projects.

The whole concept of community health care is one of continuing development as a viable alternative, in appropriate circumstances, to institutional health care.

#### **Child, Adolescent and Family Health Service**

On 30 November 1981 the School Health Branch and Child, Adolescent and Family Psychiatric Services of the South Australian Health Commission merged with the Mothers and Babies' Health Association (MBHA) to form the Child, Adolescent and Family Health Service (CAFHS). This organisation now provides preventive health services for children under the age of eighteen years and their families.

The organisation provides services in Child Health Centres, kindergartens, schools, health centres and hospitals throughout South Australia.

#### **Early Childhood Services**

At 300 centres throughout the State child health nurses offer a support service to families with young children, providing information and advice which will help with the management of normal child development and minor problems associated with the growing child. Nurses also monitor the growth and developmental progress of infants and young children. Individual and group sessions are conducted for the management of problems in the older child up to the age of five years. Physiotherapy, family management and antenatal classes are held regularly, and many parentcraft courses are conducted in various locations throughout the year. An extensive correspondence service is provided for remote and isolated families, both within Australia and overseas.

The Torrens House Hospital provides training for infant welfare nurses in South Australia. Torrens House has twenty beds and admits mothers with newborn babies for assistance in management and also treats babies and children up to the age of five years for various behavioural disorders. An Outreach program offers similar services to those provided for in-patients. Clients may also receive assistance on a daily basis at Torrens House.

Liaison nurses are based in all major metropolitan hospitals, to promote links between hospital and community services for mothers of new babies, and children who have been treated at hospital. A social work service exists for disadvantaged families including



single mothers, and families-at-risk of child maltreatment. Early childhood counselling clinics are offered by different groups of health professionals in a variety of locations for families experiencing difficulty with child management.

#### *Services to School and Pre-school Children*

The medical inspection of school children was first introduced into schools in 1913 and between 1951 and 1981 was the responsibility of a branch of the Department of Public Health and later the South Australian Health Commission.

The medical assessment program aims to detect health problems likely to affect the progress of children at school and to provide advice on appropriate management. Children in need of medical treatment are referred to other agencies. All government and most non-government schools are visited, usually several times a year. Students in Year 1 in primary schools are given a health assessment by a child health nurse. In addition, vision and hearing are assessed in Year 8, and students are offered an opportunity to discuss any health concerns with the nurse. The role of the child health nurse is being progressively extended into the community, and CAFHS staff work in close collaboration with other health and welfare workers, teaching staff and parents. During 1984 CAFHS has been implementing a program of screening children in kindergarten and child-parent centres for a selected range of physical and developmental problems. When fully operational, complete assessment of children in the first year of primary school will only need to be offered to selected students.

Child health nurses have been appointed to Priority Project Schools, Child-Parent Resource Centres and Community Health Centres. In some schools, child health nurses are responsible for providing CAFHS services to families and all children up to the age of eighteen years.

#### **Psychiatric and Other Special Services**

Psychiatric services are provided through Mitchell House (Fitzroy Terrace, Prospect), Magarey House (South Terrace, Adelaide) and Oaklands Centre (Morphett Road, Oaklands Park). Psychiatric services are also provided by CAFHS staff at Flinders Medical Centre.

Some follow-up services for children identified during screening programs in pre-schools and schools are provided. Children identified during the hearing screening program in pre-schools or schools can be further assessed by the Deafness Guidance Clinic in Rundle Mall.

The service is also active in the area of child health research and program evaluation. A multidisciplinary health project team is currently reviewing needs for health services to adolescent and experimenting with several models of service delivery.

#### **Government Dental Services**

The School Dental Service is administered by the Dental Health Services Board of the South Australian Health Commission. From its introduction in 1921 as a school dental program for remote areas, subsequent extensions of the program have seen the Service achieve its objective of making dental care available to all primary and pre-school children, by the opening of the 1981 school year.

Government funded programs of dental care for pensioners and disadvantaged persons were established in 1980 at the Flinders Medical Centre, Gilles Plains Community College and the Parks Community Health Centre. A further clinic was opened at the Whyalla and District Hospital in November 1982.

On 1 July 1982, the South Australian Dental Service was incorporated under the Health Commission Act. The new organisation was formed by amalgamating the Ade-

laide Dental Hospital (formerly the Dental Department of the Royal Adelaide Hospital) and the Dental Health Services branch of the Health Commission, and it is responsible for the provision of government funded dental services to children, pensioners and disadvantaged persons.

### NOTIFIABLE DISEASES

Under the Health Act, 1935-1984, it is required that cases of Infectious and Notifiable diseases be reported to a local board of health, which in turn advises the Central Board of Health, with the exception of tuberculosis, gonorrhoea and syphilis which are notified directly to the Central Board of Health. In 1984 Acquired Immune Deficiency Syndrome (AIDS) was included on this list though no cases were notified. It should be noted that the figures in the following table refer to cases notified and may not reflect the actual number of occurrences of the disease in the population. Of particular note were epidemics of arbovirus, campylobacter and rubella infection.

Notifiable Diseases: Cases Notified, South Australia

Diseases	1980	1981	1982	1983	1984
Amoebiasis .....	14	18	10	26	20
Arbovirus .....	—	2	17	9	136
Atypical Myobacterium infections ..	(a)	15	6	13	11
Brucellosis .....	27	11	8	1	—
Campylobacter .....	501	327	515	921	1 225
Giardiasis .....	568	661	565	714	751
Gonorrhoea .....	856	976	887	834	726
Hepatitis A .....	115	107	136	153	69
Hepatitis B .....	189	84	114	107	198
Legionnaires Disease .....	—	14	11	9	2
Leptospirosis .....	11	11	6	17	14
Malaria .....	54	38	38	43	54
Meningococcal infection .....	4	15	15	16	24
Ornithosis .....	15	8	5	9	22
Pertussis (whooping cough) .....	55	80	31	38	96
Q-fever .....	125	173	50	8	14
Rubella .....	72	33	24	75	490
Salmonella infection .....	727	743	333	480	349
Shigella infections .....	100	38	30	72	38
Syphilis .....	251	122	109	107	127
Tetanus .....	1	5	5	1	2
Tuberculosis .....	130	103	113	136	92
Yersinia infections .....	1	—	1	—	1

(a) Not notifiable.

The Venereal Disease Control Clinic at 275 North Terrace has this year returned to the administrative control of the South Australian Health Commission. Similar clinics are situated at Flinders Medical Centre, Port Adelaide Community Health Centre, and the Adelaide Womens Community Health Centre at Hindmarsh.

### Anti-tuberculosis Campaign

Compulsory X-ray surveys, introduced in 1952 to detect active cases of tuberculosis were discontinued in 1977. BCG immunisation continues to be offered to children in Year 9 at government and non-government schools. A sample of children is tuberculin tested each year.

With improved living standards since the 1939-45 War and aided by the tuberculosis campaign, the incidence of the disease has been reduced to a very low level of about 8 cases per 100 000 of mean population.

### Immunisation Programs

Diphtheria and poliomyelitis have not occurred as epidemic diseases in South Australia within the last two decades. However both whooping cough and tetanus still occur at regular intervals.

Measles immunisation on a large scale commenced in 1970 and in 1983 this was replaced by the combined measles-mumps vaccine to be given from one year of age. Rubella immunisation is offered to all females between the ages of 11 and 15 years and acceptance rates of over 93 per cent are now achieved.

### TERMINATION OF PREGNANCY

Since 1970, termination of pregnancy for specified medical and related conditions has been permitted under Section 82a of the Criminal Law Consolidation Act, 1935-1984. Certification of the grounds for termination of pregnancy is normally required from two legally qualified medical practitioners, one of whom performs the operation and all such operations are required to be undertaken in hospitals prescribed for this purpose. Notification of termination of pregnancy from certifying doctors and from hospitals where terminations take place are sent to the Director-General of Medical Services. This Section of the Criminal Law Consolidation Act is administered by the Minister of Health.

The following table gives details of terminations of pregnancy notified in recent years.

**Terminations of Pregnancy Notified: Age Distribution, South Australia**

Age Group (Years)	1979	1980	1981	1982	1983
Under 15 .....	41	36	33	32	25
15-19 .....	1 194	1 232	1 220	1 164	1 084
20-24 .....	1 138	1 239	1 298	1 264	1 219
25-29 .....	647	695	747	758	823
30-34 .....	439	480	493	486	483
35-39 .....	247	236	216	264	288
40-44 .....	131	87	103	70	99
45 and over .....	18	20	14	18	13
Not stated .....	51	48	16	3	—
Total .....	3 906	4 073	4 140	4 059	4 034

### OTHER HEALTH SERVICES

#### Blood Transfusion Service

The Red Cross Blood Transfusion Service collects and processes blood for the routine and emergency needs of all hospitals in South Australia. Blood donations are given at the Service's centre in Adelaide, at a mobile unit visiting metropolitan and country centres, and at regional centres. In 1984 over 100 000 individual donations were received.

The Service supports major blood banks at the Royal Adelaide Hospital, Queen

Elizabeth Hospital and the Flinders Medical Centre, and a reference laboratory which, in addition to performing the necessary tests on donor blood, carries out investigations for hospitals and medical practitioners. There are subsidiary blood banks at the Adelaide Children's Hospital, the Repatriation General Hospital, Modbury Hospital and the Lyell McEwin Hospital, Elizabeth, and regional blood transfusion centres have been established at Murray Bridge, Mount Gambier, Whyalla, Berri, Port Lincoln, Port Augusta and Wallaroo.

Two private pathology services also deal with blood and blood components.

The cost of maintaining the Blood Transfusion Service is met by the State Government (60 per cent), the Commonwealth Government (about 38 per cent) and the Red Cross Society (about 2 per cent).

### **Home Nursing**

The Royal District Nursing Society, a non-profit organisation, employs registered nurses in 50 locations across the State to attend the sick and disabled in their own homes providing physical, psychological, social and supportive care. Relatives are educated to assist in the care of patients, and in helping patients to help themselves.

In the period July 1984 to June 1985 district nurses are expected to make 430 000 home visits to an estimated 15 000 patients. Branch committees of voluntary workers raise money towards the purchase and running costs of motor cars.

Funding is provided by the South Australian Government (38 per cent), the Commonwealth Government (38 per cent), with the other 24 per cent coming from contributions, local government and fund raising.

### **Aerial Medical Services**

The Royal Flying Doctor Service (RFDS) of Australia is a non-profit organisation providing through its bases medical, dental, ophthalmic, School of the Air, telegram and radphon services in remote areas of Australia. The Royal Flying Doctor Service of Australia (Central Section) Inc. operates over an area of approximately 2 124 000 square kilometres in South Australia and the Northern Territory; it administers control stations at Port Augusta, and Alice Springs in the Northern Territory, three aircraft being based at Port Augusta and three at Alice Springs. For the year ended 30 June 1984 these aircraft flew a total of 790 040 kilometres in transporting 1 171 patients to hospital and treating 3 801 patients at outback clinics. A further 608 patients received dental treatment from Adelaide dentists on regular monthly visits. Doctors gave 2 704 radio consultations to outback residents and 8 596 telegrams and 28 614 radio-phone calls were transmitted from 518 licensed, fixed and portable outstations.

No flying charges are made to patients and the Service relies on donations, bequests and similar sources for approximately 20 per cent of the finance required and 80 per cent from Commonwealth and State Government grants.

### **Ambulance and Associated Services**

The St John Council for South Australia Inc. operates the ambulance service for South Australia through thirteen metropolitan bases, and seventy-nine country branches and sub-branches. Staffing is provided through an integrated system of regular and volunteer officers. In the metropolitan area during 1983-84 St John ambulances travelled 2 294 962 kilometres and carried 151 673 patients. Country ambulances travelled 2 555 329 kilometres and transported 40 770 patients. In addition three aerial ambulances, two based at Whyalla and one based at Adelaide, flew 740 794 kilometres and carried 1 376 patients. The St John Radio Network, with common frequencies, covers South Australia through fifty-six base and 230 mobile stations.

Common training programs for all officers are based on a Manual of Casualty Care and

Transport published by St John in South Australia, and all officers are required to undergo annual Skills Maintenance and Assessment. The establishment of the Medic Alert Foundation, which originated in the United States of America, has facilitated the identification of people suffering from diseases and allergies which are not readily apparent. This knowledge is of assistance to both ambulance and hospital staff in handling and treating patients. In South Australia, Medic Alert is sponsored as a joint project by St John and Rotary International and is administered by St John Council for South Australia for all States and Territories in Australia, excepting Western Australia.

First Aid courses of eight weeks duration are conducted by St John throughout the State. The courses attract a steady demand from the general public. A course 'Occupational First Aid' is designed for people working in industry and although only introduced in 1981, the interest being shown in this particular course indicates that there will be heavy demand in future.

Besides the 'First Aid' and 'Occupational First Aid' courses, St John is involved with 'Operation 4 Minutes', a program designed to teach the public the skills of cardio-pulmonary resuscitation. The Council also markets a First Aid Kit for motorists which, based on international standards, is designed for the road user in Australia.

### MEDICAL PERSONNEL

The following table lists registrations with the Medical, Dental, Pharmaceutical, Physiotherapy, Chiropodists, and Nurses Boards of South Australia, and with the Board of Optical Registration.

**Professional Medical Personnel Registered at 31 December, South Australia**

Profession	1980	1981	1982	1983	1984
Medical practitioners (a) .....	(b) 5 100	(b) 5 500	4 778	4 991	(b) 5 200
Dentists .....	748	732	782	838	827
Pharmaceutical chemists .....	973	949	933	873	947
Opticians .....	124	136	141	128	142
General nurses (c) .....	20 052	21 111	22 097	23 010	15 979
Enrolled nurses .....	9 453	10 089	10 714	11 259	8 719
Midwives .....	7 174	7 502	7 806	8 107	5 342
Psychiatric nurses .....	1 792	1 896	1 995	2 185	1 495
Mental deficiency nurses .....	870	953	987	1 032	746
Infant welfare nurses .....	891	923	946	978	923
Mothercraft nurses .....	404	410	415	421	216
Dental nurses .....	300	311	320	330	104
Physiotherapists .....	758	791	790	839	929
Chiropodists (d) .....	123	130	140	140	163

(a) Includes personnel not practising in South Australia. Date of registration is 31 January in the following year.

(b) Approximate only.

(c) General nurses may also be registered and included in other nursing categories.

(d) Date of registration is 1 July.

The figures for registered medical practitioners show the number of persons registered to practise medicine in South Australia and not the number actually practising, which is estimated at approximately two-thirds of those registered. Since the 1939-45 War there has been a considerable re-organisation of general practice in medicine with a movement away from single practices to partnership and group practice arrangements.

### CREMATORIUMS AND CEMETERIES

The first crematorium in South Australia, the Adelaide Crematorium, was erected by

the Cremation Society of South Australia, presented to the State Government in 1903 and subsequently was closed in November 1959. Cremations are currently conducted at two cemeteries in the State. The Centennial Park Crematorium was erected in 1956 and is operated by the Centennial Park Cemetery Trust. A second crematorium, constructed by the Enfield General Cemetery Trust, commenced operations in December 1969. The information that there were 4 514 cremations in South Australia in 1983 has been provided by Services and Investment Limited.

Cemeteries in South Australia are divided into three main groups; those under the control of the State Government or local government authorities, those under church control and those under the control of trusts. In each of these groups the cemeteries are financed by the usual charges for burials and by the leasing of land for burial purposes. With church and trust cemeteries, the cost of maintenance is often derived from interest accruing from invested capital funds.

### MEDICAL SCIENCE AND RESEARCH

#### Institute of Medical and Veterinary Science

The Institute of Medical and Veterinary Science, a body corporate, was established in 1937 to incorporate the functions of the former Adelaide Hospital Laboratory. The governing body of the Institute is the Council, and the chief executive officer of the Institute is the Director. Under the Institute of Medical and Veterinary Science Act, 1982, the Institute is subject to the control and direction of the Minister of Health. This Act, which repealed the Institute of Medical and Veterinary Science Act, 1937-1978, also provided for the transfer of the veterinary pathology and forensic pathology functions to the Departments of Agriculture, and Services and Supply respectively. From 1 July 1983, the Nuclear Medicine Division of the Institute was transferred to the Royal Adelaide Hospital.

The Institute provides diagnostic facilities in all branches of laboratory medicine for the Royal Adelaide Hospital and other metropolitan and country hospitals, for public health authorities, for industry, and for private practitioners. It undertakes some work in veterinary pathology for the Department of Agriculture. Research is conducted into selected problems connected with human disease. The staff of the Institute take part in the teaching of the medical sciences to graduates, students and technicians.

#### The Institute of Medical and Veterinary Science

Particulars	1980-81	1981-82	1982-83	1983-84
			'000	
Staff at end of year .....	883	863	693	665
Tests requested .....	872	870	886	947
			\$'000	
Revenue:				
State Government Grant .....	1 755	3 153	3 506	6 533
Fees for laboratory tests .....	13 405	14 788	16 147	16 619
Other .....	2 674	2 741	3 751	1 493
Total .....	17 834	20 682	23 404	24 645
Expenditure:				
Salaries and wages .....	14 093	15 632	16 751	17 798
Other .....	4 553	4 846	5 427	6 207
Total .....	18 646	20 478	22 178	24 005

The Institute was financed partly by an annual grant from the State Government, and by its earnings from work in laboratory medicine for recognised hospitals and for individual patients. From 1 February 1984, the Institute ceased charging private patients and received a compensating grant from the Commonwealth. Its research and development projects are assisted by the National Health and Medical Research Council, other research-funding bodies, certain private firms and benefactors.

At the Royal Adelaide Hospital the Institute operates a Blood Transfusion Service, and undertakes all required autopsies. Institute medical staff also take an active part in patient care by providing the clinical requirements of certain wards of the Royal Adelaide Hospital. To meet the need for laboratory services and blood transfusion in rural areas, the Institute operates eleven regional laboratories.

### **Anti-Cancer Foundation**

The forerunner of the Foundation, the Anti-Cancer Campaign Committee, was formed within the University of Adelaide in 1928. The Committee's early activities were largely devoted to establishing and developing the Radiotherapy Department of the Royal Adelaide Hospital. As demand for these facilities grew the hospital assumed responsibility for routine treatment and the Committee concentrated its activities on cancer research. In 1962 the Committee was re-organised and became the Anti-Cancer Foundation of the University of Adelaide. In 1980, Flinders University also became associated with the Foundations' management and activities.

Early research was of a clinical nature, but more recently the Foundation has subsidised cancer research projects within the Institute of Medical and Veterinary Science, the Flinders University of South Australia, the University of Adelaide, the Queen Elizabeth Hospital the Royal Adelaide Hospital, and the Adelaide Children's Hospital.

Educational campaigns are conducted to encourage the public to seek early medical advice and prompt treatment. The services of an Educational Officer are always available to assist individuals or groups and the Foundations' Resource centre makes available books and teaching aids. Social workers assist with problems associated with cancer patients being cared for at home by relatives. The Foundation has established Martin House, a well-equipped hostel to accommodate country patients receiving treatment at the Royal Adelaide Hospital. It has also set up the Mastectomy Rehabilitation Service to help women after breast surgery.

The income of the Foundation is derived from gifts and bequests, government grants and subsidies, and from direct public appeals. The Foundation is currently setting up support groups and branches in the suburbs of Adelaide, and various country towns in South Australia, to broaden its anti-cancer activities.

### **National Heart Foundation**

The National Heart Foundation of Australia and its South Australian Division were established in 1960. Its aims are research into the causes of heart and arterial diseases, the rehabilitation of patients suffering from heart and arterial diseases, and the education of doctors and the general public in all aspects of cardio-vascular problems with particular emphasis on prevention and risk factors. The National Heart Campaigns of 1961 and 1969, and various other appeals have raised significant amounts for the work of the Foundation. Since 1969, the Heart Fund Continuing Support Program has been established with the aim of providing regular annual donations to support the three-part program. In 1982, the total amount raised by the Heart Fund Program exceeded \$675 000. The campaign funds are being spent on research (66 per cent), education (20

per cent) and rehabilitation (14 per cent). Research funds, distributed at the national level, support projects in various departments at the University of Adelaide, at Flinders University, and at the Institute of Medical and Veterinary Science, the Royal Adelaide Hospital and the Adelaide Children's Hospital. Research funds are also used in providing local and overseas fellowships and travel grants.

The National Heart Foundation Centre, Adelaide was established by the South Australian Division in 1963. The South Australian Division is involved in professional education of medical practitioners and paramedical staff, and an increasing emphasis is placed on community education in order to make the public aware of the symptoms of heart attack and what to do if one occurs, and to emphasise the risk factors which increase the chances of having a heart attack. A registered nurse or education officer is available to visit and talk to interested groups.

A Heart Risk Assessment Clinic was opened at the Heart Centre in February 1978. The aim of the clinic, which is staffed by a medical officer, registered nurse and assistant, is to detect abnormalities in blood pressure and blood fat levels. A complete assessment of risk factors is carried out, covering height and weight measurements, smoking and exercise, in addition to the taking of a blood specimen and blood pressure measurement. Clients are referred back to their own doctors for further advice.

With complete financial support from the Lions' Heart Research Foundation, a Mobile Educational Unit was purchased in February 1979. The unit is used in community education with emphasis on heart-lung resuscitation classes throughout the State.

#### State Authorities: Outlay on Health, South Australia

Purpose	1978-79	1979-80	1980-81	1981-82
General administration, regulation and research .....	9 299	9 465	10 725	14 072
Hospital and clinical services:				
Mental health .....	38 908	40 505	48 127	50 344
Other hospital and clinical services .....	233 030	232 271	268 835	286 337
Other health services:				
Preventive services .....	1 061	1 230	2 360	1 523
Maternal and infant health .....	2 236	2 508	2 732	(a) 2
Domiciliary care .....	2 554	2 847	3 226	3 749
Health of school children .....	8 012	8 372	9 017	7 339
Community health facilities .....	6 199	7 221	7 216	(a) 16 157
Ambulance services .....	1 535	1 682	2 190	2 666
Other .....	11 871	11 407	14 403	16 302
<b>Total .....</b>	<b>314 705</b>	<b>317 508</b>	<b>368 831</b>	<b>398 491</b>

(a) For 1981-82 outlay on maternal and infant health is not separately available and is included under community health facilities.

## 6.6 SOCIAL WELFARE

The Commonwealth and State Governments and a large number of voluntary agencies provide social welfare services for the population. The Commonwealth Government is concerned largely with providing fixed monetary pensions and benefits and repatriation services. It also provides, either directly or through State and local government authorities and voluntary agencies, for a wide range of welfare services for people with special needs. State agencies operate in the field of child welfare and distribute emergency relief in circumstances where Commonwealth Government assistance is not available. The voluntary agencies, many of which receive government aid, provide a wide range of services in various fields of social welfare.



## COMMONWEALTH SOCIAL SECURITY

Brief details of Commonwealth Government pensions and benefits are given in this section; however, in discussing the eligibility of persons for the various payments, all the necessary qualifications and exceptions to the general rule have not been delineated.

**Age and Invalid Pensions and Allowances**

Age pensions may be granted to men aged sixty-five and over and women aged sixty and over, who have lived in Australia continuously for a period of ten years.

Invalid pensions are payable to persons aged sixteen years and over who are permanently incapacitated for work to an extent of at least 85 per cent, or are permanently blind. Where the incapacity or blindness occurred outside of Australia, other than during a temporary absence, ten years continuous residence is necessary to receive the pension.

If a person subject to the ten year qualification for either pension has completed five years but not ten years continuous residence, but has lived in Australia for periods which, in total exceed ten years, he may be eligible. Residence in New Zealand, the United Kingdom or an Australian external Territory (except Norfolk Island) may be treated as residence in Australia. Absences from Australia may, in certain circumstances, be treated as residence.

At November 1984 the maximum rate for an unmarried pensioner, or for a married pensioner whose husband or wife was not receiving an age or invalid pension, a tuberculosis allowance, a service pension, a wife's pension or an unemployment, sickness or special benefit, was \$91.90 a week. Where married pensioner couples are living apart for an indefinite period because of the illness or infirmity of either or both, each receives a pension at the single rate. The maximum married rate for a couple both being pensioners or one being a pensioner and the other in receipt of unemployment, sickness or special benefit was \$76.65 a week each. A wife's pension is payable, subject to an income or assets test, at the married rate to an age or invalid pensioner's wife who does not qualify for an age, invalid or repatriation service pension in her own right.

**Age, Invalid and Wife Pensions, South Australia**

At 30 June	Age Pensioners			Invalid Pensioners			Wife Pension- ers	Spouse Carer's Pension
	Males	Females	Total	Males	Females	Total		
1981 ....	44 165	88 413	132 578	14 157	6 475	20 632	8 700	—
1982 ....	44 727	89 894	134 621	14 887	6 416	21 303	8 882	—
1983 ....	45 236	92 156	137 392	16 679	6 623	23 302	9 580	—
1984 ....	43 462	91 965	135 427	18 618	6 784	25 402	10 285	238

An additional pension of up to \$14 a week is payable for all children under sixteen years or who are full-time students and under twenty-five years. An unmarried age or invalid pensioner having the custody, care and control of a child under sixteen years or who is a full-time student and under twenty-five years is paid a guardian's allowance of \$10 a week in addition to the pension. Up to \$15 a week extra may be paid to single pensioners or married couples who are in private rented accommodation. The amount of supplementary assistance paid depends on a person's or couple's income and the amount of rent actually paid. Supplementary assistance is not payable where rent is paid to the South Australian Housing Trust.

Age, invalid and wife's pensions, unless the pensioner is permanently blind, are subject to an income test. Additional allowances are generally subject to an income test. Under the income test, a full pension is paid if the annual income does not exceed \$1 560 (for a single pensioner) or \$2 600 (for a pensioner couple). If the income exceeds \$1 560 (or \$2 600), the annual rate of pension is reduced by half the excess.

From 21 March 1985 pensions have been dependent upon both an income test and an assets test. A person's own home is disregarded as an asset but the market value of most other assets is taken into account when the amount of pension is assessed under the assets test. A single home owner can have assets up to \$70 000 and a married home-owning couple up to \$120 000 before being affected by the assets test. A single non-home owning person can have assets up to \$120 000 and a married couple who are non-home owners can have assets up to \$150 000 before being affected by the assets test. The assets test only affects a person's pension if it results in a lower pension being paid than would have resulted from the income test.

People seventy years of age and over are subject to the same assets test as other pensioners but there is a different income test.

Certain types of income are exempted from the test. The main exemptions are: gifts or allowances from children, parents, brothers or sisters; family allowances or other payments for children; Commonwealth Government health benefits and amounts received from registered organisations in respect of a refund of hospital or medical expenses.

### **Widows Pensions**

Widows pensions are paid to widows and other women who satisfy certain conditions; there is a test on income and assets. There are three classes of pensions:

Class A, a widow with at least one child under sixteen years or supporting a full-time student over sixteen but under twenty-five;

Class B, a widow of at least fifty years of age with no children or, a Class A widow of at least forty-five years of age whose Class A pension ceases because she no longer has a child under sixteen or dependent student over sixteen but under twenty-five;

Class C, a widow under fifty years of age, with no children under sixteen or dependent student over sixteen but under twenty-five, who is in need of financial help within twenty-six weeks of her husband's or de facto husband's death.

For Classes A and B the term 'widow' includes a deserted wife who has been deserted at least six months, a divorcee, and a woman whose husband has been in prison at least six months.

For all classes the term 'widow' may also include a woman who was the common law wife of a man for at least three years immediately before his death.

A residential qualification is not required if a couple were permanent residents when the husband died or if an event occurs—such as divorce—which qualifies a woman as a 'widow'. In other circumstances five years continuous residence immediately preceding a lodgment of claim or ten years residence at any time is required. Certain absences are not considered as breaking continuity of residence, and residence in New Zealand, the United Kingdom or an Australian external Territory (except Norfolk Island) counts as residence in Australia. The income and assets tests operate similarly to that for age pensions.

The following table gives details of the number of people receiving Widows Pensions in South Australia from 1981 to 1984.

**Widows Pensions, South Australia  
At 30 June**

Class	1981	1982	1983	1984
A .....	7 877	7 787	7 741	7 510
B .....	7 948	8 205	8 177	8 196
C .....	12	16	11	16
Total .....	15 837	16 008	15 929	15 722

At November 1984, the maximum rates of pension were: Class A widows, \$91·90 a week, plus a mother's allowance of \$10 a week plus \$14 a week for each child under sixteen years or a full-time dependent student; for Class B widows, \$91·90 a week; for Class C widows, \$91·90 a week.

An additional payment of up to \$15 a week may be paid to a widow pensioner who pays for private rent or lodging. The amount of supplementary assistance paid depends on the amount of rent paid and the amount of income received by the pensioner. Supplementary assistance is not payable where rent is paid to the South Australian Housing Trust.

#### **Supporting Parents Benefit**

Supporting Parents Benefit is paid to men and women bringing up children on their own who do not receive any other pension or benefit. People eligible for supporting parents benefit include widowers, male divorcees, separated husbands or wives, including separated *de facto* husbands or wives and unmarried parents. From December 1983 eligibility was extended to a parent caring for a child or children, whose spouse is either hospitalised or in a nursing home on a long term basis. The rate, income and assets tests and other conditions are the same as for Class A widows pension.

#### **Spouse Carer's Pension**

A spouse carer's pension was introduced to assist men caring for an age or invalid pensioner spouse, where the care is required for an extended or indefinite period because of the spouse's severe disability.

The pension is paid under the conditions normally applying to wife's pensions.

#### **Portability**

Social Security pensions once granted in Australia, may continue to be paid if the pensioner goes overseas. There are some exceptions which affect only a small proportion of pensioners.

#### **Family Allowances**

Persons resident in Australia who have the custody, care and control of one or more children under the age of sixteen are eligible for family allowance. Charitable, religious, government and other approved organisations caring for children or students, may also get the allowance. Family allowance is also paid for full-time students between the ages of sixteen and twenty-five years if the student is considered to be wholly or substantially dependent on a person. There is no income test on family allowances, but one year's residence in Australia is required if the mother and child were not born in Australia; this requirement is waived if the Department of Social Security is satisfied that they are likely to remain in Australia permanently.

From November 1982 family allowance has been paid at the rate of \$22.80 a month for the first eligible child; \$32.55 for the second; \$39 for the third; \$39 for the fourth; \$45.55 for the fifth and each subsequent child. Family allowance of \$39 a month is paid for each child in an institution.

The following table gives details of family allowances in South Australia for the years 1980 to 1984.

**Family Allowances, South Australia**

At 30 June	Families		Institutions		Total Number of Children
	Number of Families	Number of Children (a)	Approved Institutions	Number of Children (a)	
1980 .....	184 544	359 056	65	563	359 619
1981 .....	184 226	354 938	42	454	355 392
1982 .....	184 211	352 345	30	458	352 803
1983 .....	186 509	354 730	27	424	355 154
1984 .....	186 268	352 793	24	349	353 142

(a) Children under the age of sixteen and full-time students between the ages of sixteen and twenty-five.

### **Handicapped Child's Allowance**

A disabled child's allowance was introduced in December 1974. The allowance is paid to parents or guardians who provide constant care and attention for a seriously disabled child in their own home. It is paid to help meet the extra costs in caring for a disabled child. It is aimed at encouraging the care of such children at home rather than in an institution. For a severely disabled child, the allowance is \$85 a month. Parents' or guardians' income does not affect the payment.

For a substantially disabled child the amount depends on both parents' or guardians' income, and the additional costs involved with caring for the child. The maximum payment is \$85 a month. In November 1978 this allowance was extended to cover disabled children under twenty-five years of age who are full-time students but who do not receive an invalid pension.

### **Double Orphans Pension**

A pension of \$55.70 a month is payable to the guardian of a child under sixteen years or a full-time student between the ages of sixteen and twenty-five years who has both parents dead or one dead and the other missing. The benefit is also payable in respect of either an adopted child or a child whose sole surviving parent is a long-term inmate of a prison or mental hospital. Eligibility has been extended to include refugee children whose parent or parents are living outside Australia or whose whereabouts are unknown.

If an orphan child is being cared for by an approved charitable or religious institution the pension may be paid to the institution.

### **Unemployment and Sickness Benefits**

Unemployment benefit is paid to persons who are unemployed but are seeking to re-enter the workforce. Sickness benefit is payable where a temporary incapacity has resulted in a loss of income. There is a means test on income but not on property. Persons eligible must be between sixteen and sixty-four years of age (fifty-nine for women) with either twelve months residence or the intention to reside permanently in Australia. A person receiving an alternative social security pension or benefit is ineligible for unemployment and sickness benefits.

To qualify for unemployment benefit a person must (a) be unemployed other than through industrial action, (b) be able and willing to undertake suitable work, and (c) have taken reasonable steps to secure work.

The amount of income which a person may receive and still qualify for the maximum rate of benefit is \$20 a week. The benefit is reduced by half the amount of other income

earned between \$20 and \$70 a week, and by the full amount earned above \$70 a week. For unemployment and sickness benefit, the income of the claimant's husband or wife is taken into account. Special conditions apply where the wife receives an age, invalid or service pension.

From November 1984 the weekly rates of sickness benefit are \$91.90 for a single person aged eighteen years or more, \$153.30 for a married couple and \$45.00 for a person over sixteen, but under eighteen years. The weekly rates of unemployment benefit are \$91.90 for a single person aged eighteen years or more with dependants, \$81.10 for a single person aged eighteen years or more without dependants, \$153.30 for a married couple and \$45.00 for a person over sixteen but under eighteen years. An additional \$14 a week is payable in all cases for each child.

People on unemployment or sickness benefit who are between sixteen and eighteen can have their payment increased by \$5 per week after they have been receiving the payment for six months.

Normally, there is a waiting period before a person becomes entitled to unemployment or sickness benefit. Entitlement generally starts from the seventh day after the claim is lodged, or the seventh day after the person last worked, whichever is later or alternatively for sickness benefit from the seventh day after the date of incapacity subject to the income test and loss of income provisions. Where a person has a recurring incapacity a waiting period is not requested on subsequent claims.

If a person was unemployed, able and willing to work, and actively seeking work prior to lodging the claim, the full unemployment benefit waiting period may not have to be served.

People who become voluntarily unemployed, without good reason, are not paid for the first 6-12 weeks. Social Security advises these people how long the period will be.

Secondary school leavers are not eligible for unemployment benefit until six weeks after they have left school or have completed their examinations. Similar provisions apply to tertiary students who, without good reason, cease full-time studies before completing their course.

#### Unemployment and Sickness Benefits, South Australia

Year	Unemployment		Sickness		Special (a)	
	Number Granted	Average on Benefit (b)	Number Granted	Average on Benefit (b)	Number Granted	Average Benefit (b)
1979-80 ....	78 136	37 000	12 224	2 800	4 375	850
1980-81 ....	78 535	37 999	12 978	3 725	4 889	1 304
1981-82 ....	82 496	44 488	14 104	4 547	4 841	1 232
1982-83 ....	97 113	55 245	14 085	4 878	7 062	1 743
1983-84 ....	84 970	59 526	13 562	5 425	10 877	1 682

(a) Excludes special benefits to migrants in accommodation centres.

(b) Average of the number at the end of each week.

#### Supplementary Assistance/Allowance

Supplementary assistance is payable, subject to an income test, to an age, invalid, wife or widow pensioner, or a person receiving a supporting parents benefit if he or she pays rent or lodging and has little or no income apart from the pension or benefit. A similar payment, known as supplementary allowance, may be made to a sickness beneficiary who has received benefit for a continuous period of six weeks. The amount of supplementary assistance paid depends on a person's or couple's income and the amount of

rent actually paid. Supplementary allowance is not payable where rent is paid to the South Australian Housing Trust.

### **Special Benefits**

A special benefit may be granted to those persons unable to earn a living, who are in need and not in receipt of any other pension or benefit. Persons who can receive special benefit include: those caring for sick relatives; women without partners for a time before and after the birth of a child; those who are in hardship while waiting for some other pension or benefit. The rate of the benefit depends on the circumstances but cannot be more than the rate of unemployment or sickness benefits.

### **Mobility Allowance**

In April 1983 a mobility allowance of \$10 per week, free of income test or income tax, was introduced. This is to keep in work or training severely disabled people who are unable to use public transport to travel to work or training because of their disabilities.

### **Family Income Supplement**

A family income supplement for low income families (apart from those in receipt of a pension or benefits) was introduced in May 1983. The supplement, which is income tested, is up to \$14 per week, tax free, for each child.

### **Commonwealth Pensioner Fringe Benefits**

Eligible pensioners and sickness beneficiaries may receive the following Commonwealth pensioner fringe benefits:

- free medical treatment if the treating doctor bulk bills (otherwise 85 per cent of the schedule fee is reimbursed subject to a maximum patient payment of \$5 per service);
- free optometrical consultations from participating optometrists;
- a range of free pharmaceuticals;
- free hearing aid services;
- a one-third telephone rental concession (subject to the incomes of co-residents);
- postal redirection fee concessions; and
- a 50 per cent fare concession for travel on Australian National railways (AN) and the Australian National Line (ANL).

Eligibility for these concessions is generally restricted to those whose income, apart from pension or benefit, is less than \$60 a week in the case of a single person, or \$98 a week combined in the case of a pensioner or beneficiary couple. The income limits are higher for recipients of sheltered employment allowances or where there are children.

A person whose pension is assessed under the assets test will be entitled to concessions if their assets are below the following figures:

- single homeowner \$80 000;
- single non-homeowner \$130 000;
- married homeowner \$115 000;
- married non-homeowner \$165 000.

### **Health Care Benefits**

*Pensioner Health Benefits Cards* are issued, subject to an income test, to people receiving aged, invalid, wives and widows pension, tuberculosis allowance and supporting parents benefit. Eligible persons receive medical benefits for services rendered by private general practitioners, specialists and consultant physicians, free treatment in

public hospitals and free medicines, as covered by the pharmaceutical benefits scheme. Pensioners' dependants are also covered.

*Health Care Cards* are issued to other specified groups and their dependants, including immigrants and refugees for their first six months in Australia (free of income test), most people receiving unemployment benefit and, people with income below specified limits. Holders of a health care card are not entitled to free pharmaceutical benefits except as a public hospital outpatient.

*Health Benefits Cards* are issued to people receiving sickness benefit (free of income test). Hospital and medical benefits available to them are the same as those applicable to pensioner health benefit card holders.

*Pharmaceutical Benefits Concession Cards* are issued to pensioners who are not eligible for fringe benefits and to holders of health care cards. Holders of health care cards or pharmaceutical benefits concession cards are eligible to receive certain pharmaceuticals at the concession rate of \$2.

### Rehabilitation

The Commonwealth Rehabilitation Service (CRS) division of the Department of Social Security provides assessment, treatment and avenues for training, either for work or independent living, for disabled people. This is achieved through a program of medical, social, educational and vocational rehabilitation. The aim of rehabilitation is to help disabled people overcome any difficulties they have, thus allowing them to enjoy life in the workplace, at home, and in the community.

#### Rehabilitation, South Australia

Year	Number Accepted for Rehabilitation	Number Placed in Employment	Expenditure (a)
			\$
1980-81 .....	436	147	2 439 000
1981-82 .....	677	182	2 698 000
1982-83 .....	642	153	3 330 000

(a) Excludes capital expenditure on sites and buildings, and administrative cost of the Rehabilitation Service.

The CRS facilities and services are available to disabled people within the broad working age group, namely sixteen to sixty years if female and sixteen to sixty-five years if male, who are likely to derive substantial benefit from rehabilitation treatment and/or training. Children aged fourteen to fifteen years may also be accepted if they are likely to receive an invalid pension on attaining the age of sixteen years.

Referrals for rehabilitation assistance are accepted from any source. This includes medical practitioners and specialists, allied health professionals, welfare and community organisations, and agencies, Commonwealth and State Government departments, employers, workers compensation insurance firms, relatives and friends of disabled people and disabled people themselves.

#### Rehabilitation Allowance

A rehabilitation allowance, training allowance, living away from home allowance and costs incurred in travelling for treatment and training may be paid during the rehabilitation program. The rehabilitation allowance was introduced in March 1983 for eligible people undergoing rehabilitation, who would otherwise have received another social

security pension or benefit. The allowance is paid at the same rates and under the same conditions as invalid pensions.

#### *Sheltered Employment Allowances*

Disabled people employed in sheltered workshops who would otherwise qualify for invalid pension may be eligible for sheltered employment allowance. This is paid as a supplement to wages paid by the sheltered workshop.

Payment is made at the same rate as invalid pension and is subject to an income test but is not subject to income tax.

An incentive allowance of \$10 a week is also paid to people who receive sheltered employment allowance. The incentive allowance is income test free and exempt from income tax.

#### **Funeral Benefits**

A funeral benefit of up to \$40 is payable to a pensioner (and persons in receipt of certain other pension related payments) who is liable for the funeral cost of a deceased spouse, child or other pensioner. A lesser amount of \$20 is payable where a non-pensioner is liable for the funeral cost of a deceased aged, invalid or wife's pensioner (or a deceased claimant who would have been eligible for such a pension). Pensioner means a person who satisfies the Commonwealth Government pensioner and fringe benefits income test.

#### **Homes for the Aged**

The *Aged or Disabled Persons Homes Act 1954* provides that grants may be made to certain organisations towards the capital cost of erecting or purchasing approved homes for aged or disabled people. To be eligible for subsidy, the organisation providing the accommodation must be a non-government body which does not operate for profit and can be a religious organisation, a charitable organisation, an organisation of former members of the Defence Services, or a local government body. Grants are made on the basis of \$2 for each \$1 (excluding government assistance and borrowed money, except that borrowed by local government bodies) raised by an organisation. The maximum subsidy limits under the Act are \$15 020 for a single unit and \$17 425 for a double unit, plus a maximum of \$1 920 a unit for land, based on capital cost of \$2 880 per unit.

At 30 June 1984, 710 grants had been approved in South Australia since the inception of the scheme in 1954. The amount granted, \$70 948 693, was associated with the accommodation of 12 465 persons. Since October 1969, a personal care subsidy has been provided in terms of this Act, to eligible organisations providing personal care services in hostel-type accommodation for persons of eighty years of age and over. In 1982, the subsidy was increased to \$30 per week, and the cover extends to persons who, though not yet eighty years of age, required personal care services.

In 1983-84 expenditure under this Act in South Australia totalled \$6 245 324; of this amount \$1 800 484 was for capital grants and \$4 444 840 for personal care subsidies.

The *Aged Persons Hostel Act 1972* is designed to encourage the provision of hostel accommodation for the aged. Subject to certain conditions, the Commonwealth meets the cost of providing additional hostel accommodation by eligible organisations up to a maximum of \$22 530 a person. The Commonwealth also pays an additional grant of up to \$2 400 a person for the purchase of land, and \$250 for furnishings.

The *States Grants (Home Care) Act 1969*, which is administered by the Department of Social Security, provides for financial assistance to the States to assist them in developing senior citizens' centres and a range of home care services providing housekeeping or other domestic assistance for aged persons in their homes. Payments to South Australia for the year ended 30 June 1984 amounted to \$436 789 for senior citizens' centres,



\$174 783 towards the salaries of welfare officers employed in connection with senior citizens' centres and \$1 229 575 for home care services.

### **Delivered Meals Service**

Under the *Delivered Meals Subsidy Act 1970*, financial assistance is provided to organisations to establish, maintain, expand and improve 'meals on wheels' services. These organisations must be non-profit, charitable, benevolent or welfare bodies not controlled by the Commonwealth or State Governments. The basic rate of subsidy is 50 cents for each meal plus 5 cents for each meal including an approved Vitamin C supplement and 50 cents for all other eligible meals. The South Australian subsidy totalled \$522 014 in 1983-84.

### **Homeless Persons Assistance**

The *Homeless Persons Assistance Act 1974* provides for assistance to non-profit organisations and local government bodies which provide accommodation, food and social welfare services for homeless men and women.

The Act enables grants to be made to eligible organisations to meet the cost of purchasing, constructing, altering or renting buildings to be used as homeless persons assistance centres, as well as to meet the cost of purchasing and installing furniture and equipment for such centres. Grants also meet half the salary of a social welfare worker employed at a centre, and help to meet the cost of providing food and accommodation for homeless persons at an approved centre, or of meals provided at such centres for non-residents. The rate of the food and accommodation subsidy has been prescribed at \$1.35 cents per day and the rate of meals subsidy at 45 cents per meal. Up to 30 June 1984 funds totalling \$2 651 837 had been made to eligible organisations in South Australia.

### **Disabled Persons Assistance**

Under the *Handicapped Persons Assistance Act 1974*, financial assistance is provided by the Commonwealth Government to eligible organisations conducting sheltered workshops, training centres, activity therapy centres and residential accommodation for disabled persons. All capital and equipment subsidies are paid at a rate of up to \$4 for every \$1 raised from non-government sources. A subsidy covering 50 per cent of actual salaries may be paid during an initial period in the case of new enterprises or of 80 per cent for selected key staff. Since October 1970, a training fee of \$500 has been paid to sheltered workshop organisations for each disabled person who remains in normal employment for twelve months following at least six months training by the organisation. Since October 1983 a payment of \$500 has been paid to the disabled person as an incentive employment bonus. During the year ended 30 June 1984, expenditure totalling \$10 818 804 was approved under the Act to be paid to eligible organisations in South Australia.

### **Handicapped Childrens Benefit**

A benefit is payable by the Commonwealth Government for each physically or mentally disabled child who is under sixteen years of age and resides in an approved home conducted by a charitable organisation. From November 1976, the rate of benefit has been \$5 per day. In 1983-84, expenditure by the Commonwealth Government on disabled children's benefits in South Australia was \$119 915. At 30 June 1984, 122 eligible disabled children were accommodated in thirteen approved homes.

### Childrens Services

Under the Childrens Services program, capital and recurrent grants may be made to State and local government bodies and community-based non-profit organisations for a range of child care projects.

The aim of the program is to provide care for children and families most in need, and is supplementary to services provided by State Governments.

Priority is given to supporting child care projects for:

- children of low income families;
- children with particular needs, such as Aboriginal and migrant children, disabled children and isolated children;
- children 'at risk'; and
- multi-purpose projects providing a variety of services.

### Reciprocal Agreements

*New Zealand.* An agreement exists between the Governments of Australia and New Zealand for reciprocity in social services. The arrangements cover age, invalid, wives and widows pensions, family allowances, and unemployment and sickness benefits, and apply to both permanent and temporary changes of residence. Residence in one country may be treated as residence in the other country in relation to entitlement to benefits in which a residential qualification applies. Persons from one country taking up permanent residence in another country may qualify for any of the specified benefits of the new country under the same conditions as apply to citizens of that country. Persons in receipt of any of the specified benefits in one country may continue to receive those benefits while temporarily absent in the other country, depending on the eligibility criteria of the particular benefit.

*Britain.* A reciprocal agreement on social services exists between Britain and Australia. Under the current agreement residence in one country may be treated as residence in the other country as the basis for entitlement to benefits in which a residential qualification applies. Australians going to Britain for permanent residence are treated in Britain as if national insurance contributions had been paid while in Australia, so that they can qualify for various National Insurance benefits. There is also provision for the safeguard of social service rights for persons going from one country to the other for temporary residence.

### Telephone Rental Concessions

The Department of Social Security, with Telecom, provides telephone rental concessions to qualified pensioners and persons receiving sickness benefit, in the form of a one-third reduction in annual rental charges.

### Telephone Interpreter Service

A Telephone Interpreter Service operates through the Department of Immigration and Ethnic Affairs as an adjunct to migrant welfare services. It acts as a multi-lingual information service both to migrants, especially those with queries regarding government services, and to professional people experiencing language problems with a patient or client.

## EXPENDITURE

The following table sets out Commonwealth Government expenditure in South Australia on social welfare, which includes expenditure under the Social Security Act, other Acts, National Health Service and disability and service pensions.

**Commonwealth Government Expenditure on Social Welfare, Selected Items  
South Australia<sup>(a)</sup>**

Type of Benefit	1980-81	1981-82	1982-83	1983-84
	\$'000			
Social Security Act:				
Age and invalid pensions .....	472 416	544 874	598 618	673 503
Widows pensions .....	63 647	72 136	76 430	83 307
Family allowances .....	88 861	96 856	125 474	137 887
Unemployment benefits (b) ....	133 184	166 430	252 365	269 374
Sickness benefits (b) .....	17 043	20 466	22 737	26 620
Supporting parent's benefits (b)	48 097	69 571	77 941	93 271
Delivered Meals Subsidy Act .....	361	406	451	522
Aged or Disabled Persons Homes				
Act (c) .....	2 600	4 213	7 463	9 322
Aged Persons Hostels Act .....	3 733	422	2 130	203
States Grants (Home Care) Act ..	1 293	1 754	1 936	592
Disability pensions (b) .....	40 832	41 780	52 484	59 129
Service pensions (b) .....	71 258	84 948	110 196	133 688

(a) Where applicable the amounts shown include payments for supplementary assistance, allowances and additional pensions for children. (b) Includes Northern Territory. (c) Includes Personal Care Subsidy.

### REPATRIATION BENEFITS

#### Service Pensions

Service pensions are payable to ex-servicemen who served in a theatre of war and have reached the age of sixty years (fifty-five for women) or who are permanently unemployable. Before November 1978, incapacity from pulmonary tuberculosis was also a basis of eligibility. The service pension is equivalent in amount to the age and invalid pensions and is subject to the same income test. Pensions received in respect of service related disabilities are free of the income test. It also confers eligibility for a full range of medical and dental treatment, provided the separate income limit for fringe benefits is not exceeded. The dependants of service pensioners may continue to receive their appropriate allowance upon the death of the pensioner. From March 1985, all service pensioners have been subject to an income and assets test.

#### Service Pensions, South Australia <sup>(a)</sup>

Pensions in Force at End of Year					
Year	Ex-servicemen	Dependants of Pensioner Ex-servicemen	Dependants of Deceased Pensioners	Total	Expenditure
		Number			\$'000
1979-80 ....	15 076	9 696	324	25 096	53 439
1980-81 ....	17 104	11 282	313	28 699	71 258
1981-82 ....	18 773	12 712	300	31 785	84 948
1982-83 ....	21 029	14 684	273	35 986	110 196
1983-84 ....	22 643	16 184	267	39 094	133 688

(a) Includes Northern Territory.

### Disability Pensions

Disability pensions are paid by way of compensation to ex-servicemen and women who suffer incapacity because of war service, to their eligible dependants, and to the dependants of those whose death is related to service. Since 7 December 1972 serving members of the armed forces and eligible dependants have also been eligible for disability pensions if incapacity or death is related to defence service.

#### Disability Pensions, South Australia <sup>(a)</sup>

Pensions in Force at End of Year					
Year	Incapacitated Ex-servicemen	Dependants of Incapacitated Ex-servicemen	Dependants of Deceased Ex-servicemen	Total	Expenditure
		Number			\$'000
1979-80 ....	16 605	18 936	4 477	40 018	35 634
1980-81 ....	16 191	18 424	4 414	39 029	40 832
1981-82 ....	15 832	17 888	4 419	38 139	41 780
1982-83 ....	15 525	17 470	4 831	37 826	52 484
1983-84 ....	15 308	17 107	5 177	37 592	59 129

(a) Includes Northern Territory.

There are four main classes of disability pensions.

The special (TPI) rate (\$171.30 a week from 8 November 1984) is payable to those who are deemed totally and permanently incapacitated.

The intermediate rate (\$117.95 a week from 8 November 1984) is payable to an ex-serviceman who, because of the severity of his service-related incapacity, can work only part-time or intermittently and in consequence is unable to earn a living wage.

The general rate is payable to those who suffered service-related disabilities but still retained some earning capacity. The pension payable depends on the degree of incapacity, the maximum from November 1984 being \$64.60 a week. Pensions are also payable for a wife and each child under sixteen years of age under both special and general pensions. Student children also qualify.

The widow's rate is payable to widows of ex-servicemen who died as a result of service, and to any children under sixteen years of age. An additional domestic allowance is payable to certain classes of widow. From November 1984, the widow's rate was \$91.90 a week and the domestic allowance \$12.

### Medical Services

The Department of Veterans' Affairs provides hospital treatment, general practitioner services, specialist facilities, pharmaceutical benefits, dental treatment, and nursing home benefits for eligible persons. A comprehensive rehabilitation and social worker service is also available. Medical treatment is provided for all service-related disabilities, pulmonary tuberculosis, and all forms of malignant cancers. Treatment for all non-service-related disabilities is made available to: veterans receiving a disability pension at or above the 100 per cent general rate; veterans of the Boer and 1914-18 Wars and 1939-45 War veterans receiving a disability pension at or above 50 per cent of the general rate plus a service pension; veterans with service related amputations or loss of vision in one eye who are in receipt of a disability pension; veterans who are ex-prisoners of war; veterans in receipt of service pensions (subject to income being within the limits governing the provision of free medical treatment and other fringe benefits); widows and

certain dependants of deceased male veterans whose deaths have been accepted as related to service or who at the time of their death were receiving the Special Rate Pension for total and permanent incapacity or blindness.

In-patient and out-patient treatment is provided at the Repatriation General Hospital, Daw Park. Facilities at the Out-patient Department include radiological, pathological, physiotherapy, and podiatry services in addition to medical specialist examinations.

The Repatriation Artificial Limb and Appliance Centre, as well as attending to repatriation needs, provides appliances and services for other government departments and provides artificial limbs free of charge to all disabled members of the community.

#### Department of Veterans' Affairs: Medical Services, South Australia <sup>(a)</sup>

Year	In-patients: Total Treated		Out-patients: Number of Visits		
	Daw Park	Other Hospitals	Daw Park	Visits to or by Medical Officer	Pharmaceutical Benefits
			Number		\$
1979-80 .....	6 395	479	81 314	182 563	2 927 296
1980-81 .....	6 608	592	85 242	186 456	2 985 541
1981-82 .....	7 447	779	87 791	205 448	3 776 382
1982-83 .....	7 147	797	89 762	192 548	4 170 399
1983-84 .....	7 537	770	90 760	203 212	4 319 519

(a) Includes Northern Territory.

#### Education and Training

Assistance in education and training is provided, through the Department of Veterans' Affairs for children of ex-servicemen whose death, blindness or total and permanent incapacity is accepted as service-related. The Soldiers' Children Education Board guides and supervises the progress of children receiving such assistance.

#### Other Services

Other assistance, through the Department of Veterans' Affairs, includes gift cars for certain disabled ex-servicemen, aids for blinded ex-servicemen and business re-establishment loans. Funeral grants of up to \$500 are paid on the death of certain ex-servicemen and dependants.

#### ABORIGINAL ADVANCEMENT

By agreement with the South Australian Government on 1 December 1973 the Commonwealth Government assumed responsibility in relation to Aboriginal affairs policy, planning, financial administration, information and co-ordination. These functions are administered in South Australia by officers of the Department of Aboriginal Affairs in Adelaide, Port Augusta and Ceduna. The Commonwealth Government assists those Aboriginals who wish to adopt, wholly or partly, a European lifestyle. At the same time, the Government encourages self-management by Aboriginals and preservation of their cultural heritage.

The following table shows funding by the Department of Aboriginal Affairs on various aspects of Aboriginal advancement.

## Department of Aboriginal Affairs: Funding, South Australia

Particulars	1981-82	1982-83	1983-84
Direct funds:		Dollars	
Health .....	989 910	1 165 466	2 411 375
Education .....	802 500	483 194	538 999
Social support .....	489 700	441 800	620 306
Community councils .....	2 891 651	3 740 341	5 138 177
Culture and recreation .....	79 634	134 052	127 500
Legal aid .....	681 184	915 733	1 128 036
Employment .....	2 068 784	2 155 004	4 292 130
Training .....	237 599	379 950	357 756
Total .....	8 240 962	9 415 540	14 614 279
State Grants:			
Department for Community Welfare .....	743 700	679 600	743 661
Education Department .....	1 585 800	2 275 000	2 393 753
Department of Correctional Services .....	—	—	3 700
Department of Further Education .....	829 700	895 200	1 041 767
South Australian Health Commission .....	1 611 900	1 779 800	1 611 110
South Australian Public Service Board ....	4 500	—	—
Department of Recreation and Sport .....	—	15 000	6 200
Community Management Services .....	—	2 484 000	895 100
Total .....	4 775 600	8 128 600	6 695 291

The policy of the Commonwealth Government is that, wherever possible, Aboriginal people should avail themselves of the normal facilities provided for the total community, for example, welfare, health and education, and the State or Commonwealth Government departments responsible for these functions will continue to provide such services. Where special additional programs are needed for Aboriginal people the Commonwealth Government will provide the finance to enable these to be carried out through the appropriate Government or voluntary agency, with the co-ordination of arrangements being handled by the Regional Director of the Department of Aboriginal Affairs. Funds in 1983-84 were also made available direct to thirty-six Aboriginal organisations and communities within South Australia for programs designed to develop Aboriginal self-management and achievement. In addition, 107 Aboriginals were employed on forty-three Special Work Projects with an expenditure of \$367 000. Up to 600 Aboriginals were employed on Community Development Employment Projects at Amata, Ernabella, Fregon, Indulkana, Mimili, Kalka, Yalata, Inyaringi and Pipalyatjara with an expenditure of \$4 292 130.

In September 1979 a State Ministry of Aboriginal Affairs was established. An Office of Aboriginal Affairs was created, with the main responsibilities of advising the Minister on policies and issues, the co-ordination of special services provided by State Government departments for Aboriginal people, and liaison and co-operation with the Commonwealth Department of Aboriginal Affairs.

The Commonwealth Department of Aboriginal Affairs funds special services provided by the various State departments, and these are co-ordinated through the South Australian Aboriginal Co-ordinating Committee. The Committee provides an opportunity for senior officers of departments to meet regularly with Aboriginal representatives, and to travel to remote areas of the State to consult with Aboriginal communities. The Office of Aboriginal Affairs provides the Secretariat for the Co-ordinating Committee.

On 1 July 1980 the Aboriginal Development Commission (ADC) was established. It replaced the Aboriginal Land Fund Commission and the Aboriginal Loans Commission, and took over the Aboriginal enterprises program from the Department of Aboriginal Affairs. Responsibility for direct funding of Aboriginal Housing Associations passed from the Department to the ADC on 1 July 1981. The ADC is able to acquire land for Aboriginal communities and groups, lend money to Aboriginals for housing and to finance business enterprises.

**Aboriginal Development Commission: Funding, South Australia**

Particulars	1982-83	1983-84	1984-85
	Dollars		
General fund:			
Land acquisition .....	—	—	350 000
Housing grants .....	738 000	943 000	939 000
Enterprises loans .....	246 000	543 000	376 300
Enterprises grants ....	219 000	195 000	514 700
Total .....	1 203 000	1 681 000	2 180 000

Specific needs in education were met with the establishment in 1973, of both the Aboriginal Community College, as part of the Underdale Campus of the South Australian College of Advanced Education, and the Aboriginal Task Force at the South Australian Institute of Technology (SAIT). The Community College provides remedial work-oriented training and self-development courses for Aboriginals who have had difficulty in maintaining work continuity. Task Force students can enter SAIT on special entry and study for an Associate Diploma in Social Work or Business Administration. Successful students may be eligible to proceed to degree work in various departments of SAIT. Students can be awarded a Community Development Certificate after their first or second years. The Certificate is recognised by the Commonwealth and South Australian Public Service Boards as equivalent to matriculation. In 1983 the Aboriginal Task Force introduced a Bachelor of Arts in Aboriginal Affairs Administration degree, Australia's first degree-level course to train Aboriginals for positions in government, education and private enterprise.

Teacher-training programs for Aboriginal people were introduced by the Underdale Campus of the South Australian College of Advanced Education in 1978. These programs, along with courses of study about Aboriginal life, were brought under one roof with the establishment in 1981 of an Aboriginal Studies and Teacher Education Centre on the Campus.

The Aboriginal Education Consultative Committee advises the Minister of Education and related agencies on educational issues affecting Aboriginal people.

Aboriginal people decided in 1975 to set up the South Australian Woma Committee to deal with prevention of alcohol abuse and rehabilitation. Since then, eight sub-committees have been set up in various parts of South Australia and all follow programs based on medical input and using therapy programs to change behavioural patterns.

The Aboriginal Housing Board is an incorporated Aboriginal organisation which works in co-operation with the South Australian Housing Trust and the Aboriginal Development Commission to develop housing policies and approaches, determine funding priorities and assist Aboriginal communities to plan and implement effective housing programs.

The Aboriginal Health Organisation was formed as an independent incorporated body, under the Health Commission Act in September 1981. The Board of the Organisation,

which is composed of eight Aboriginals and two non-Aboriginals, is responsible for all policy decisions in regard to special health services for Aboriginal people. In December 1983, the Ngamnapa Health Service was established on the Pitjantjatjara Lands. This is an Aboriginal controlled community-based health service funded by both the Commonwealth and State Governments.

The establishment of these two health organisations under Aboriginal control allows self-management in service-delivery to Aboriginal people.

### **Aboriginal Lands Trust**

The Aboriginal Lands Trust was established by the South Australian Government in 1966 to hold the permanent freehold titles of existing Aboriginal Reserves, together with the titles to other land which would be purchased in future years for the use of Aboriginals. The Trust carries out its work on behalf of all Aboriginal people in South Australia and is completely independent of the Government.

Currently, policy of the Trust is to act essentially as a land title holding body only and to lease its land and assets to Aboriginal communities, organisations and individuals without interference in the running or use of those properties.

Communities incorporated under the Associations Incorporation Act have an elected council. Advisory and/or managerial staff are appointed according to the degree of control and management responsibility accepted by the community.

In March 1979, the South Australian Government set up a working party to examine the Aboriginal Lands Trust Act, 1966-1984. It was established to examine the system of land acquisition and holding, the functions of the Trust and the number and method of appointing members. It was also charged with reviewing provisions of the Act in respect of mining on lands held by the Trust. The report was submitted in September 1979.

### **Aboriginal Land Rights Legislation**

The Pitjantjatjara Land Rights Act was proclaimed on 1 October 1981, granting on a freehold basis to the Pitjantjatjara people the whole of the existing North West Aboriginal Reserve and adjacent pastoral leases mostly operated by Aboriginal people. There are special provisions for the control of the land by the Aboriginal people, including control of mining activities, access to the land, and for the payment of mining royalties.

The Maralinga Tjarutja Land Rights Act was passed on 27 March 1984 and was proclaimed on 6 December 1984.

The legislation is modelled on the Pitjantjatjara Land Rights Act. The land is held freehold by the Aboriginal traditional owners. There are some concessions regarding access to traverse the lands and concerning compensation for mining exploration. The area of the actual bomb tests at Maralinga is held under a Land Grant by the Commonwealth and is not included in the land vested in the Aboriginal people. A small area around the Emu bomb site has also been excluded at this stage.

## **DEPARTMENT FOR COMMUNITY WELFARE**

The South Australian Department for Community Welfare promotes the general well-being of the community, encourages the welfare of the family as the basis of community welfare, promotes co-ordination of services and collaboration among various agencies and promotes research, education and training in community welfare.

The Community Welfare Act provides for the establishment of community welfare centres or district offices at selected locations throughout the State and the full range of



the Department's services is available from these centres. There are twenty-three offices in the metropolitan area and twenty-two in the country. Six regional offices and a central administrative office oversee the work of district offices.

The decentralisation program has led to involvement in the community and its many welfare needs. There is greater flexibility and opportunity to support local efforts to provide new services for youth, the aged, single parents and others in need.

The Department for Community Welfare's library has one of the most comprehensive collections in Australia on social welfare and related topics, and is used by staff, tertiary students, foster parents and other people in contact with the Department.

The Department has developed and extended its ties with Commonwealth and other State Government departments and with local government and voluntary bodies. A Community Welfare Grants Advisory Committee, established in 1972, recommends grants to assist voluntary community welfare organisations with both capital and operating costs. During 1984, \$1 309 140 was provided in grants to 196 organisations.

Neighbourhood Youth Workers help local people learn the skills and develop the resources to establish a wide variety of activities for young people. The Duke of Edinburgh's Award scheme in South Australia provides a wide range of activities for the personal development of young people.

A special 24-hour emergency service in the Adelaide metropolitan area helps in personal and family crises. This service works in close co-operation with the Police Department. Crisis Care workers especially trained to help people under stress, provide on-the-spot assistance to individuals and families, and cars fitted with two-way radios ensure prompt attention, where necessary.

A Budget Advice service operates from thirty-five locations to help people manage their budgets, re-arrange debts and plan their spending.

### Care and Supervision of Children

Under the Children's Protection and Young Offenders Act, 1979-1984, a balance is sought between the care and guidance of the young people before Children's Aid Panels and Children's Courts and the protection of the community. The importance of the family in the child's development is also given emphasis.

Where the Minister is of the opinion that a child (up to eighteen years) is in need of care, the Department for Community Welfare makes application to the Children's Court for a declaration. If the Court finds the child to be in need of care it can place the child under the guardianship of the Minister or, alternatively, the control of the Director-General.

The Education Department institutes proceedings before a Children's Aid Panel and in some cases a Children's Court for truancy matters for children up to the school leaving age of fifteen years.

Screening panels, constituted by a police officer and a community welfare worker, have been established to decide whether a young person alleged to have committed an offence is appropriately dealt with by a Court or a Children's Aid Panel.

For young people found guilty of an offence the Children's Court has a variety of orders available. These include fines, bonds, attendance at a Project centre, sentence of detention or a suspended sentence of detention.

Many of these orders involve the Department in the young person's life for a specific period of time. While the aim is to preserve and strengthen the relationship between the young people and their parents, placement away from home is sometimes necessary.

The Youth Project Centre, Magill, provides intensive non-residential treatment facilities for young offenders, and the Regional Youth Project services provide a similar service from decentralised locations. The Norwood Project Centre helps children who are referred with learning and behavioural difficulties. The Western and Northern Suburbs Project Teams provide a similar service to schools and departmental district offices in the Northern and Western metropolitan areas.

The Intensive Neighbourhood Care scheme, implemented in 1979, provides personal care for young offenders who would otherwise be sent into care; they live with specially selected and trained families. During 1983-84, 333 young people were placed with Intensive Neighbourhood Care families.

Children's Aid panels provide a non-judicial setting in which to deal with young people who are alleged to have committed an offence. Each panel is constituted of a police officer and a community welfare worker, who meet with the child and his or her family to discuss the offence and the family situation. Panels sit in most of the district office locations. When the panel is dealing with truancy a representative from the Education Department replaces the police panelist.

#### *Children's Court Services*

Reports are presented on most young people appearing before a court. Officers from the Department for Community Welfare appear in the Children's Courts to present these reports and make any further submission required. These officers liaise with the field staff involved with the child and his family.

Children's Courts officers also make applications to the Court on behalf of the Minister and conduct 'in need of care' proceedings.

#### *Residential Care*

During 1979-80 the Department instigated a re-organisation of its community-based residential care facilities. The new system provides metropolitan regions with regional admission units for short-term crisis care, assessment and outreach for teenage offenders and regional group homes for teenage offenders who need therapeutic care. The changes have provided greater staffing resources in the areas of most need.

At 30 June 1984, there were 1 214 children under guardianship or control orders, of whom 77 were in departmental homes and centres and 1 137 in their own homes or placed in foster families.

The centres under the control of the Department include the Youth Training Centre for older youths remanded in custody or who have been sentenced to detention by a Children's Court following an offence, and the South Australian Youth Remand and Assessment Centre which provides for girls, generally from twelve to eighteen years, and (since September 1978) for boys from ten to fifteen years.

Lochiel Park is a training centre for boys, generally between the ages of fourteen and eighteen years, who are slightly mentally retarded and under care and control of the Minister. In addition, cottage and family homes provide a family-like atmosphere for small groups of boys and girls.

There were 912 children placed on bonds requiring supervision by Departmental officers during 1983-84 and the total number of such children at 30 June 1984 was 541 (463 boys and seventy-eight girls).

Details of the number of children under the guardianship of the Minister of Community Welfare are given in the following table.

**Children Placed under Guardianship or Control Orders for the First Time, 1982-83**

Particulars	Males	Females	Total	Proportion of Total
	Number			Per cent
From the Children's Courts:				
Guardianship of the Minister of Community Welfare (a) .....	78	83	161	65.45
Control of the Director-General of Community Welfare .....	42	24	66	26.83
Admitted under Community Welfare Act:				
Guardianship of the Minister of Community Welfare .....	2	4	6	2.44
Transfer of control (interstate) .....	8	5	13	5.28
Total (b) .....	130	116	246	100.00

(a) Includes short-term guardianship during periods of adjournment.

(b) In addition to the above, there were 154 children (75 boys and 79 girls) admitted to the temporary Guardianship of the Minister of Community Welfare. During the year, 182 children (92 boys and 90 girls) were released when the short-term need for assistance had ceased.

The importance of keeping children in their own homes whenever possible cannot be over-emphasised and children are placed out of departmental homes and centres as soon as possible. Review boards consider the social background of each child under the Department's control and make recommendations regarding action to be taken for the child's benefit and welfare.

When a child returns to home from an alternative placement, support is continued to the whole family through counselling, motivation of self-help programs, and through the full utilisation of appropriate resources throughout the Department and the community. The same services are available to all children under care and control or on bonds with supervision as well as to other families in the community seeking help.

Other responsibilities of the Department's welfare workers include the investigation of allegations that children are ill-treated or in need of care, and the counselling of youths and children voluntarily referred to departmental officers. Seven regional panels have been set up under the Community Welfare Act to consider cases of child abuse. The panels aim to minimise both the number of cases occurring and their severity.

### **Licensing of Foster Parents and Childrens Homes**

Under the Community Welfare Act, every foster parent caring for a child must be approved by the Director-General of Community Welfare, who is responsible for each child's welfare. Social workers visit such homes regularly.

Consultant and licensing services are also provided for child care, family day care and baby-sitting agencies. Family day care co-ordinators are working in nineteen districts.

The Department is responsible for licensing non-statutory children's homes in which children under the age of eighteen are cared for apart from their parents or near relatives. Recommendations concerning approval, residential care practice, standards and funding of children's homes are made by the Residential Child Care Support and Advisory Committee, comprising four Government and four non-statutory agency members appointed by the Minister.

### Adoptions

South Australia has had an Adoption of Children Act since 1925, the current legislation being the Adoption of Children Act, 1966-1980. Under this Act the interests of the children are considered paramount.

There are three types of adoptions:

- adoptions where a child surrendered by its natural parent(s) is placed with approved adoptive parents;
- adoptions of children from overseas; and
- adoptions by applicants who are already caring for the child, mainly the adoption of children by step-parents, but also including adoptions by relatives or foster parents.

The right to place children for adoption is restricted to the Director-General of Community Welfare or to private adoption agencies which the Director-General has approved. The adoptive parents, who must be approved by the Director-General, become the legal parents after the adoption order is made by an Adoption Court (usually about six months after placement).

The following table refers to all types of adoption where the Court order has been finalised during the financial years shown.

Number of Adoptions, South Australia

Age of Child (a)	1980-81	1981-82	1982-83	1983-84
Under one year .....	166	129	102	105
One year and under two .....	21	15	21	20
Two years and under six .....	31	83	106	106
Six years and over .....	168	139	195	197
Not stated (b) .....	119	30	—	—
Total .....	505	396	424	428

(a) At date of adoption order.

(b) Where the prospective adopting parents applied directly to the court for an adoption order the Department for Community Welfare has no details.

Adoptions made in other Australian States are recognised in South Australia; similarly South Australian adoptions are recognised in other States. A more detailed account of the South Australian legislation was included on pages 221-4 of the *South Australian Year Book* 1968.

On 10 August 1978 new regulations came into effect which provide criteria for the selection of people wishing to adopt Australian children: these criteria are based on recommendations of the Community Welfare Advisory Committee on adoption matters. On 27 March 1980 further regulations were made which provide criteria for the selection of people wishing to adopt children from overseas.

The next table gives for the two types of adoption the number of adoption orders granted, the number of applications and the number of children placed during the financial year. The number of children placed does not include children adopted by step-parents or relatives *i.e.* those situations where an agency has not actively arranged the placement of the child.

## Adoptions, South Australia

Particulars	1979-80	1980-81	1981-82	1982-83	1983-84
Number of adoptions granted:					
Identity not disclosed .....	138	125	106	78	85
Particular person—identity known .....	311	323	226	294	289
Inter-country .....	28	52	60	49	47
Particular person—inter-country (a) .....	—	5	4	3	7
Total .....	477	505	396	424	428
Number of applications received:					
Identity not disclosed .....	225	219	201	175	157
Particular person—identity known .....	332	269	250	331	289
Inter-country .....	103	85	59	79	81
Particular person—inter-country (a) .....	—	6	10	3	35
Total .....	660	579	520	588	562
Number of children placed (b):					
Australian born .....	117	115	93	94	69
Inter-country .....	73	54	58	51	71
Total .....	190	169	151	145	140

(a) Before 1980-81, adoptions in this category were included in the one category of inter-country adoption.

(b) The average waiting time for a child to be placed varies from year to year depending on the number of applicants and the number of children surrendered.

## Legal Services

Applications for a declaration that a child is in need of care are carried out by officers of the Department for Community Welfare except where the case is contested. In such cases the Law Department appears on behalf of the Department. The Department assists by providing reports on the social background of children whose cases are considered by the Courts, as well as Assessment Panel reports in certain cases.

The Department provides a free service to deserted wives and other persons with maintenance, matrimonial and domestic problems. Officers interview and advise wives and husbands and negotiate with other parties and solicitors for settlements.

When necessary the officers institute legal proceedings and appear in Court on behalf of those seeking assistance to obtain orders for separation, custody of children, access and maintenance. The Department does not take action for divorce. Some 2 700 maintenance payments are collected and paid weekly to deserted wives by the Department. Assistance is given to unmarried mothers in affiliation cases.

## Emergency Financial Assistance

The Director-General of Community Welfare may, subject to any directions of the Minister, provide assistance to families or individuals in need. The assistance may be provided in the form of money or commodities or the provision of other services which will promote the welfare of the family or individual. Before November 1980 this assistance was also available to sole parents waiting to qualify for Supporting Parent's

Benefit (*i.e.* the first six months after application). Since then the Department of Social Security has assumed responsibility for income support for all sole parents, although many initially apply to the Department for Community Welfare, and may receive emergency on-the-spot assistance.

During 1983-84 financial assistance was issued in 34 209 cases and the amount paid totalled \$1 070 491.

The Department provides residential care in a home at Magill for aged people in special need, most of whom are pensioners. The daily average occupancy of the Magill home was ninety-four during 1983-84.

### Rates Remission Scheme

A remission of rates and taxes scheme for pensioners and others able to demonstrate exceptional circumstances of hardship is operated by the State Government. The scheme provides for a remission of up to 60 per cent of the cost of water and sewerage rates, and council rates charged on dwellings, including flats and units owned and occupied by eligible applicants. Pensioners receive a direct remission from the rating authority on application. Applications from non-pensioners are processed by the Department for Community Welfare and in 1983-84, 27 215 claims were approved. The total cost of remissions by all authorities was met by the Department and totalled \$19 386 569 for 1983-84 in the following categories:

	\$
Water, sewerage .....	8 566 629
Local government .....	9 237 546
Remissions to non-pensioners .....	1 582 394

### STATE GOVERNMENT AND STATUTORY AUTHORITY EXPENDITURE ON SOCIAL SECURITY AND WELFARE

The following table shows outlay by State Authorities from Consolidated Revenue Account on various aspects of social security and welfare. For further details of the classifications in the table see Part 11.3 State Government Finance.

#### State Authorities: Outlay on Social Security and Welfare South Australia <sup>(a)</sup>

Particulars	1979-80	1980-81	1981-82	1982-83
		\$ million		
		SOCIAL SECURITY		
Widows, deserted wives etc. benefits (b)	5.1	— 0.3	—	—
Unemployment benefits .....	0.6	0.2	0.3	0.2
Family and child care benefits .....	—	—	—	—
Sole parent benefits .....	1.3	1.8	—	—
Social security <i>n.e.c.</i> .....	13.3	15.9	18.7	28.1
Total .....	20.3	17.6	19.0	28.3

**State Authorities: Outlay on Social Security and Welfare  
South Australia <sup>(a)</sup>(continued)**

Particulars	1979-80	1980-81	1981-82	1982-83
			\$ million WELFARE	
Administration <i>n.e.c.</i> .....	12.0	11.1	12.0	13.6
Family and child welfare .....	5.4	5.7	6.4	10.0
Aged and handicapped welfare .....	16.8	18.3	21.3	26.0
Welfare services <i>n.e.c.</i> .....	4.1	6.2	7.0	8.2
Total .....	38.3	41.3	46.7	57.8
Total .....	58.5	59.1	65.5	86.3

(a) Details shown are net of charges for services supplied.

(b) From 1 July 1980 the State withdrew from the funding arrangement with the Commonwealth and ceased paying income support to sole mothers, except in appropriate cases.

### PRIVATE AGENCIES

There are numerous charitable and benevolent organisations working within South Australia. A large proportion of these derive revenue from regular donations, subscriptions and income from bequests; nearly all derive revenue from special functions. A number also receive Commonwealth, State or local government grants. The Collections for Charitable Purposes Act, 1939-1982, requires the registration of charitable organisations before they may actively solicit funds.

Organisations which have a wide range of activities include the Australian Red Cross Society, Marriage Guidance Council, Service to Youth Council, the welfare bureaus and missions of the various churches, and organisations catering for ex-servicemen and their dependants. Most of these agencies maintain full-time staff and generally employ professional social workers. Other organisations cater for more specific needs, covering a wide range of physical and sociological disabilities. This includes the care of physically and mentally handicapped persons such as crippled children, the blind, deaf-mutes and alcoholics; also of specific groups such as aged persons, Aborigines and migrants. Many of these organisations depend largely or entirely on voluntary aid.

Details of the numerous bodies concerned with social welfare are contained in the *Directory of Social Welfare Resources* published jointly by the South Australian Council of Social Services and the Citizens Advice Bureau. For those in need, the Citizens Advice Bureau advises on how to benefit from and how to use wisely the many services provided by the Commonwealth and State Governments and the various provided by the Commonwealth and State Governments and the various voluntary organisations.

### REGISTERED MEDICAL AND HOSPITAL BENEFIT ORGANISATIONS

In 1953 Australia introduced a system of voluntary health insurance supervised and financially supported by the Commonwealth Government. Medical benefits and full hospital benefits were payable to members of a registered organisation. In most cases both medical and hospital benefits were provided by the one organisation.

With the introduction of Medicare in February 1984 the role of these organisations has been limited to providing cover for accommodation and treatment at private hospitals, or private accommodation at a public hospital, by a doctor of the patient's choice.

The contributions (premiums) payable to hospital benefits organisations depend on the scale of fund benefits required. Contribution rates may vary slightly between funds, and single and family rates are available.

## FRIENDLY SOCIETIES

Friendly Societies are mutual organisations offering endowment, funeral benefits and other forms of insurance to cover members and dependants in time of need. These societies are required to register under the Friendly Societies Act, 1919-1982. The Act is administered by the Chief Secretary through the Public Actuary who approves the table of contributions, the level of benefits and generally sees that the societies' rules and practices are in accordance with the law. The regulations to the Act provide for a limit of \$10 000 on the amount which may be insured under endowment or funeral benefits. A limit of \$20 000 is placed on insurance that is primarily for investment purposes.

Before the introduction of Medicare in February 1984 the operations of the National Health Service Association and Mutual Health, which was not a friendly society, were merged. The main insurance provided by the new organisation is cover for accommodation and treatment at private hospitals or at public hospitals with a doctor of the patient's choice. The new organisation is not a friendly society.

The following tables give details of the operations of friendly societies for the years 1979-83.

## Friendly Societies, South Australia

Particulars	1979-80	1980-81	1981-82	1982-83
Registered societies (a) .....	9	9	9	9
Number of members (a) (b) .....	39 431	38 061	36 171	35 017
Revenue (c):	\$'000			
Contributions and levies .....	59 877	61 333	63 664	99 987
Interest, dividends and rent ....	3 156	4 505	5 664	7 456
Other .....	1 905	10 553	10 714	14 455
Total revenue .....	64 939	76 392	80 042	121 898
Expenditure (c):				
Sick pay and sums payable on death/maturity .....	318	386	383	355
Medical attendance and medicine .....	26 972	29 816	33 773	37 983
Hospital benefits .....	17 885	15 464	21 384	31 908
Administration .....	14 095	15 100	16 896	19 410
Other benefits .....	—	—	794	1 100
Other .....	5 666	11 666	6 430	2 066
Total expenditure .....	64 936	72 432	79 660	92 822
Total funds .....	31 261	38 761	59 505	104 485

(a) At 30 June. The number does not include four societies which do not have traditional friendly society membership.

(b) Full benefit members; does not include those who contribute for medical and hospital benefits only.

(c) Receipts and payments of Commonwealth Government medical and hospital benefit subsidies excluded.

The large increase in contributions in 1982-83 is because of the introduction of insurance primarily for investment purposes.

The Friendly Societies' Medical Association Incorporated operates thirty pharmacies in the metropolitan area and one at Port Pirie where medicines are dispensed for Friendly Societies' members at concession prices. The United Friendly Societies' Dispensary Inc. operates a shop at Mount Gambier. The Friendly Societies Act also prescribes the nature of assets which societies may hold. The Societies' investments are mainly in mortgages, fixed interest securities and property.



## PART 7

# LABOUR

## 7.1 EMPLOYMENT

### THE LABOUR FORCE

Particulars of the number of persons who constitute the labour force in South Australia are available from periodic population censuses. For the 1966 Census the definition of the labour force was revised to accord with the recommendations of the Eighth International Conference of Labour Statisticians, and the revised approach has been retained for subsequent censuses. The major factor in this change was the inclusion of a number of females working part-time who did not previously consider themselves as 'engaged in an industry, business, profession, trade or service'.

The use of sample processing in 1976 may have resulted in minor differences between the sum of estimated components and estimated totals. In the following table, population at the 1976 and 1981 Censuses is classified by labour force status (whether in or out of the labour force), employment status (whether employed or unemployed) and status of worker, which refers to the status of each employed person in his or her occupation *e.g.* employer, worker on own account, working for wages, etc.

Although the female proportion of the labour force continued to increase, from 36.7 per cent in 1976 to 38.3 per cent in 1981, there was a decrease in the proportion of married females in the labour force, from 24.6 per cent in 1976 to 23.6 per cent in 1981.

**Labour Force Status of Persons in South Australia <sup>(a)</sup>**  
**Censuses 1976 and 1981**

Labour Force Status	30 June 1976			30 June 1981		
	Males	Females	Persons	Males	Females	Persons
<b>In labour force:</b>						
Employer .....	18 986	8 904	27 890	20 063	9 345	29 408
Self-employed ...	36 182	16 807	52 989	37 658	18 123	55 781
Employee .....	291 670	166 638	458 308	279 888	177 389	457 277
Helper .....	1 489	6 659	8 148	1 155	4 291	5 446
Unemployed .....	10 608	8 947	19 555	27 611	17 945	45 556
<b>Total labour force .....</b>	<b>358 934</b>	<b>207 955</b>	<b>566 889</b>	<b>366 375</b>	<b>227 093</b>	<b>593 468</b>
<b>Not in labour force .....</b>	<b>261 221</b>	<b>416 641</b>	<b>677 862</b>	<b>269 321</b>	<b>422 244</b>	<b>691 565</b>
<b>Total persons .....</b>	<b>620 156</b>	<b>624 596</b>	<b>1 244 752</b>	<b>635 696</b>	<b>649 337</b>	<b>1 285 033</b>

(a) Census count not adjusted for underenumeration.

The following table shows the employed population at the 1981 Census classified by occupation. Occupation refers to the kind of work a person normally performs e.g. carpenter, clerk, and is classified according to the Australian Classification of Occupations which has been adapted from and closely adheres to the principles embodied in the International Standard Classification of Occupations issued by the International Labour Office, Geneva 1958 and as revised in 1968. It contains eleven major groups subdivided into seventy-three minor groups further subdivided into 389 individual categories.

**Employed Persons: Occupation, South Australia, 30 June 1981 <sup>(a)</sup>**

Occupation Group	Males	Females	Persons	
			Number	Proportion of Total
				Per cent
Professional, technical and related workers .....	39 928	39 889	79 817	14.6
Administrative, executive and managerial workers .....	28 209	5 204	33 413	6.1
Clerical workers .....	27 056	58 161	85 217	15.6
Sales workers .....	22 794	24 872	47 666	8.7
Farmers, fishermen, hunters, timbergetters and related workers .....	33 395	11 770	45 165	8.2
Miners, quarrymen and related workers .....	1 307	49	1 356	0.2
Workers in transport and communication .....	21 519	3 329	24 848	4.5
Tradesmen, production-process workers and labourers (n.e.i.) .....	134 369	18 152	152 521	27.8
Service, sport and recreation workers .....	15 671	32 207	47 878	8.7
Members of armed services, enlisted personnel .....	3 231	160	3 391	0.6
Occupation inadequately described or not stated .....	11 285	15 356	26 641	4.9
<b>Total employed persons .....</b>	<b>338 764</b>	<b>209 149</b>	<b>547 913</b>	<b>100.0</b>

(a) Census count not adjusted for underenumeration.

Industry refers to the branch of productive activity, trade or service in which the individual works or carries out his occupation. The Australian Standard Industrial Classification (ASIC), designed primarily as a system for classifying establishments (e.g. individual mines, factories, shops etc.) by industry, was used as a basis for the 1981 Census. Tabulations derived for the census divide the whole field of industry into twelve

major industry divisions, which in turn are divided into forty-eight subdivisions, 124 groups and 451 classes. For census purposes a number of additional 'undefined' categories were added to qualify imprecise or generalised descriptions of industrial activities reported in census schedules.

In the next table the number of employed males and females aged fifteen years and over at the 1981 Census are classified according to industry. The proportion of employed persons engaged in community services increased from 15.3 per cent in 1976 to 17.5 per cent in 1981. The percentage recorded as employed in manufacturing industries continued to fall, from 20.8 per cent in 1976 to 19.0 per cent in 1981, in contrast to the opposite trend evident between 1933 and 1966.

**Employed Persons: Industry, South Australia, 30 June 1981 <sup>(a)</sup>**

Industry Group	Males	Females	Persons	
			Number	Proportion of Total
				Per cent
Agriculture, forestry, fishing, etc. ....	30 114	11 998	42 112	7.7
Mining .....	3 633	518	4 151	0.8
Manufacturing .....	80 842	23 202	104 044	19.0
Electricity, gas and water .....	9 565	597	10 162	1.9
Construction .....	26 470	3 447	29 917	5.5
Wholesale and retail trade .....	57 314	42 632	99 946	18.2
Transport and storage .....	21 163	3 427	24 590	4.5
Communication .....	7 759	2 598	10 357	1.9
Finance, business services, etc. ....	21 042	17 389	38 431	7.0
Public administration, defence .....	19 263	7 314	26 577	4.9
Community services .....	33 706	61 957	95 663	17.5
Recreation, personal services, etc. ....	11 432	16 262	27 694	5.1
Other and not stated .....	16 459	17 807	34 266	6.3
<b>Total employed persons .....</b>	<b>338 762</b>	<b>209 148</b>	<b>547 910</b>	<b>100.0</b>

(a) Census count not adjusted for underenumeration.

The following table shows the age distribution of the labour force at the 1976 and 1981 Censuses.

**Age Distribution of the Labour Force, South Australia  
Censuses 1976 and 1981**

Age Group (Years)	30 June 1976			30 June 1981		
	Males	Females	Persons	Males	Females	Persons
15-19 .....	34 513	31 426	65 939	35 627	32 978	68 605
20-24 .....	46 532	34 519	81 051	50 090	39 467	89 557
25-34 .....	90 085	47 164	137 250	98 295	56 851	155 146
35-44 .....	66 832	40 651	107 483	73 050	46 362	119 412
45-54 .....	68 829	36 251	105 080	62 191	33 558	95 749
55-59 .....	26 501	10 413	36 913	27 956	10 618	38 574
60-64 .....	18 429	4 560	22 989	13 515	3 999	17 514
65 and over .....	7 215	2 972	10 187	5 651	3 260	8 911
<b>Total labour force .....</b>	<b>358 935</b>	<b>207 955</b>	<b>566 890</b>	<b>366 375</b>	<b>227 093</b>	<b>593 468</b>

### Labour Force Survey

In addition to complete census counts, estimates of the civilian labour force are prepared from the results of surveys based on a sample of dwellings throughout Australia. These surveys began in 1960 on a quarterly basis and were initially confined to the six State capital cities, but in 1964 were extended to include non-metropolitan urban and rural areas, thereby enabling derivation of estimates of the total civilian labour force

in Australia. From February 1978, the surveys have been conducted on a monthly basis. The proportion of the population included in the surveys varies from State to State (1 per cent in South Australia) but in aggregate about 0.67 per cent of the Australian population is included.

Statistics obtained from the surveys include numbers employed and unemployed; labour force participation and unemployment rates; duration of unemployment; analyses of reasons for working less than thirty-five hours per week; as well as age, sex, birthplace, family status, occupation and industry characteristics.

### Labour Force Status of the Civilian Population Aged 15 Years and Over, South Australia

August	Employed	Unemployed		Total	Labour Force	Not in Labour Force	Civilian Population Aged 15 years and Over	Unemployment Rate (a)	Participation Rate (b)
		Looking for Full-time Work	Looking for Part-time Work						
Per Cent									
MALES ('000)									
1975 .....	355.0	10.3	(c)	11.5	366.5	81.7	448.2	3.1	81.8
1976 .....	361.0	9.4	(c)	11.0	372.0	85.3	457.3	3.0	81.3
1977 .....	359.2	17.3	3.3	20.6	379.8	86.5	466.3	5.4	81.5
1978 (d) ...	349.4	27.3	(c)	28.3	377.7	97.4	475.1	7.5	79.5
1979 .....	348.7	23.1	(c)	23.8	372.6	107.0	479.6	6.4	77.7
1980 .....	347.7	24.9	(c)	26.8	374.5	110.8	485.2	7.2	77.2
1981 .....	350.6	27.0	(c)	27.7	378.3	113.6	491.9	7.3	76.9
1982 .....	342.6	26.9	(c)	28.7	371.3	126.7	498.0	7.7	74.6
1983 .....	335.4	38.5	(c)	40.8	376.2	128.3	504.5	10.8	74.6
1984 .....	345.1	33.7	(c)	35.6	380.7	130.3	511.0	9.4	74.5
FEMALES ('000)									
1975 .....	194.3	11.5	5.6	17.0	211.3	251.9	463.2	8.0	45.6
1976 .....	203.2	9.1	4.6	13.7	217.0	254.3	471.3	6.3	46.0
1977 .....	208.7	13.1	4.7	17.8	226.6	254.1	480.7	7.9	47.1
1978 (d) ...	203.9	12.4	3.5	15.9	219.8	274.7	494.5	7.2	44.5
1979 .....	200.1	16.7	4.7	21.3	221.4	279.0	500.4	9.6	44.3
1980 .....	202.2	16.7	4.3	21.0	223.2	282.4	505.6	9.4	44.1
1981 .....	207.2	17.0	3.7	20.8	228.0	285.5	513.5	9.1	44.4
1982 .....	207.3	16.0	5.9	21.9	229.2	290.9	520.1	9.6	44.0
1983 .....	202.5	18.8	4.3	23.1	225.6	301.3	527.0	10.3	42.8
1984 .....	213.5	18.4	4.6	23.0	236.6	297.7	534.2	9.7	44.3
PERSONS ('000)									
1975 .....	549.3	21.7	6.8	28.5	577.8	333.7	911.4	4.9	63.4
1976 .....	564.2	18.5	6.2	24.7	589.0	339.6	928.6	4.2	63.4
1977 .....	568.0	30.5	8.0	38.5	606.4	340.6	947.0	6.3	64.0
1978 (d) ...	553.3	39.8	4.4	44.2	597.5	372.1	969.6	7.4	61.6
1979 .....	548.8	39.8	5.4	45.2	594.0	386.0	980.0	7.6	60.6
1980 .....	549.9	41.5	6.2	47.7	597.6	393.2	990.8	8.0	60.3
1981 .....	557.8	44.1	4.4	48.5	606.3	399.1	1 005.4	8.0	60.3
1982 .....	549.9	42.9	7.7	50.6	600.5	417.6	1 018.1	8.4	59.0
1983 .....	537.9	57.3	6.6	63.9	601.8	429.7	1 031.5	10.6	58.3
1984 .....	558.6	52.1	6.5	58.7	617.3	428.0	1 045.3	9.5	59.1

(a) The unemployment rate for any group is the number unemployed expressed as a percentage of the labour force (i.e. employed plus unemployed) in the same group.

(b) The labour force participation rate for any group is the civilian labour force expressed as a percentage of the civilian population aged 15 years and over in the same group.

(c) Subject to sampling variability too high for most practical uses.

(d) Estimates for periods before February 1978 are based on 1976 Census benchmarks. From February 1978 onwards estimates are based on 1981 Census benchmarks.

In the labour force survey a new sample of dwellings was selected and a revised questionnaire was introduced from the October 1982 survey. The new sample of dwellings was chosen in order to reflect the changes in the distribution of the population shown by the 1981 Population Census results, and the labour force series from February 1978 onwards have been revised accordingly. This has resulted in a break in series between November 1977 and February 1978.

Since the estimates are based on a sample, they may differ from the figures that would have been obtained from a complete census using the same questionnaire and procedures. One measure of the likely difference is given by the standard error, which indicates the extent to which an estimate might have varied by chance because only a sample and not the whole population was enumerated. The smaller the estimate the higher is the relative standard error. For example, the standard error of an estimate for South Australia of 500 000 persons is approximately 3 300 (0.7 per cent), while that of an estimate of 3 000 is approximately 550 (18.3 per cent). There are about two chances in three that a sample estimate will differ by less than one standard error from the figures that would have been obtained from a comparable complete enumeration, and about nineteen chances in twenty that the difference will be less than two standard errors.

The definition of the labour force used in the population census is similar to that used in the survey. However, data from the labour force survey is based upon a sample employing a personal interview approach, while census data is obtained from census schedules completed by householders. Evidence indicates that the personal interview approach tends to identify a larger number of persons as being in the labour force than does the filling in of the questions on the census schedule by the householder. This should be borne in mind when making comparisons between the two sets of data.

Further details may be obtained from the following bulletins: *The Labour Force—Australia (Preliminary)* (Catalogue No. 6202.0); *The Labour Force—Australia* (Catalogue No. 6203.0). In addition, *Labour Force—South Australia* (Catalogue No. 6201.4) contains detailed figures for South Australia.

### Special Studies

The sample of dwellings referred to in respect of the labour force survey has provided the framework for a number of special studies. These have recently included: labour force experience; transition from education to work; the distribution of weekly earnings of wage and salary earners; information on persons not in the labour force; information about the job search experience of unemployed persons; information about changes of employment or job location and other aspects of the mobility of the labour force; the retirement intentions of persons employed full-time; apprentices; and information about the highest educational qualifications attained by persons in the labour force. Brief summaries of some of these studies are given in the following pages.

Since the estimates provided in these studies are based on sample surveys they are subject to sampling error, the magnitude of which is described in some detail in the bulletins for each topic.

#### *Transition from Education to Work*

In May 1984, a survey was conducted in conjunction with the labour force survey in order to obtain, among other things, information about persons aged 15 to 24 years who had attended full-time at a school, university or other educational institution at some time during 1983. Separate information was obtained in respect of persons who had returned to full-time education in 1984 and those who had not returned to full-time education. The latter group was defined as being leavers.

The number of leavers aged 15 to 24 years who entered the labour force, expressed as a percentage of total leavers aged 15 to 24 years, describes their labour force participation rates. This rate for South Australian males in May 1984 was the same as the national rate of 96.0 per cent while the equivalent rate for females was 90.5 per cent in this State and 92.9 per cent for Australia. Of the 25 600 leavers aged 15 to 24 years in this State, 18 000 were employed and 5 900 unemployed in May 1984.

Further details may be obtained from the bulletin *Transition from Education to Work—Australia* (Catalogue No. 6227.0).

### *Job Search Experience of Unemployed Persons*

In association with the July 1984 labour force survey unemployed persons (excluding persons who were stood down) were asked about their job search experience, including their difficulties in finding work, steps taken to find work and whether they had had offers of employment, as well as about their educational attainment and the particulars of their last job, if any.

#### **Unemployed Persons: Difficulties in Finding Work, South Australia, July 1984**

Difficulties in Finding Work	Main Difficulty	All Difficulties Reported (a)		
	Persons	Males	Females	Persons
		'000		
Own ill health or handicap .....	2.6	4.2	(b)	5.3
Considered by employers to be too young or too old .....	12.0	13.5	10.1	23.6
Unsuitable hours .....	(b)	(b)	2.3	3.3
Too far to travel/transport problems .....	2.7	4.5	5.3	9.8
Lacked necessary education, training or skills .....	6.4	11.1	7.2	18.4
Language difficulties .....	(b)	(b)	(b)	2.0
Insufficient work experience .....	6.0	9.7	7.7	17.4
No vacancies in line of work .....	7.7	15.2	7.6	22.9
No vacancies at all .....	10.3	16.1	7.7	23.7
Other difficulties .....	3.0	3.4	2.7	6.1
No difficulties reported .....	3.3	(b)	(b)	3.3
Total .....	55.8	..	..	..

(a) These estimates differ from those shown under 'main difficulty' because some respondents reported more than one difficulty in finding work.

(b) Subject to sampling variability too high for most practical uses.

For further information see *Job Search Experience of Unemployed Persons—Australia* (Catalogue No. 6222.0).

### *Persons Not in the Labour Force (Including Persons who wanted to work but who were not defined as unemployed)*

Each March and September the labour force survey includes questions to obtain information about persons aged fifteen years and over who are not in the labour force and, in particular, about those who do not meet all of the criteria to be classified as unemployed but who, nevertheless, have marginal attachment to the labour force. Marginal attachment includes persons who were not actively looking for work but who wanted to work and were available to start within four weeks, and persons who were actively looking for work but were not available to start in the week prior to the interview.

#### **Persons Not in the Labour Force with Marginal Attachment to the Labour Force: Main Reason for Not Actively Looking for Work, South Australia, March 1984**

Main Reason (a)	Females	Persons
	'000	
Personal reasons .....	14.2	22.1
Own ill health, disability, pregnancy .....	3.2	5.8
Attending an educational institution .....	4.5	8.9

**Persons Not in the Labour Force with Marginal Attachment to the Labour Force:  
Main Reason for Not Actively Looking for Work, South Australia, March 1984 (continued)**

Main Reason <sup>(a)</sup>	Females	Persons
		'000
Personal reasons— <i>continued</i>		
Had no need to work .....	2.9	3.3
Other personal reasons .....	3.5	4.1
Family reasons .....	24.1	24.7
Unable to find suitable childcare .....	5.3	5.6
Preferred to look after children .....	14.4	14.7
Other family reasons .....	4.3	4.4
Discouraged job seekers .....	6.2	7.8
Considered too young or too old by employers .....	(a)	2.8
No jobs at all .....	(a)	2.0
Other discouraged job seekers (b) .....	2.7	3.0
Other reasons .....	9.2	12.6
Total .....	53.8	67.2

(a) Subject to sampling variability too high for most practical uses.

(b) Includes 'no jobs in locality or line of work'.

Because of changes introduced from September 1983, data for earlier surveys is not comparable. For further information see *Persons Not in the Labour Force, Australia (including persons who wanted to work but who were not defined as unemployed)* (Catalogue No. 6220.0).

### EMPLOYED WAGE AND SALARY EARNERS

In the September quarter of 1983 a quarterly Survey of Employment and Earnings was introduced to obtain from employers information on the numbers of wage and salary earners employed each month and their quarterly earnings. (The earnings data is input into the estimates of national income for the quarterly Australian National Accounts). The series provides a measure of occupied jobs with no adjustment for multiple job holding.

The survey covers a sample of private employers and all government units. Not all employers are covered; the principal exclusions are those in the private sector engaged in agriculture, forestry, fishing and hunting, private households and members of the permanent defence forces. Employees on leave without pay for the whole of the reference period are excluded. Also excluded are those stood down, on strike, or locked out without pay for the whole of the reference period. Employees on workers compensation are excluded unless they continue to be paid through the payroll.

As the estimates of private sector employment are based on information obtained from a sample of employers rather than a full enumeration, they are subject to sampling variability.

The new series differs from estimates of employed wage and salary earners provided by the Labour Force Survey and from the former Civilian Employees series. However, for the government sector there is a statistical link with the former Government Civilian Employees series available. For further information see *Employed Wage and Salary Earners, Australia* (Catalogue No. 6248.0)

The following table shows industry and sector estimates for the new series.

## Employed Wage and Salary Earners, South Australia

Month	Industries				Sector			Total	
	Manufacturing	Wholesale and Retail Trade	Community Services	Other	Government		Private		
					Commonwealth	State			Total
MALES ('000)									
Aug 1983 ....	71.3	46.0	36.7	100.3	28.2	55.8	89.5	164.8	254.3
Nov .....	71.8	48.0	36.9	101.6	28.4	55.8	90.2	168.1	258.3
Feb 1984 .....	73.0	46.4	34.6	103.0	28.3	54.0	88.5	168.5	257.0
May .....	73.5	45.8	37.9	105.1	28.0	55.9	90.3	171.9	262.2
Aug .....	72.8	47.1	38.5	105.6	28.1	55.7	90.2	173.6	263.7
FEMALES ('000)									
Aug 1983 ....	21.7	39.0	67.9	48.0	8.6	48.8	59.1	117.4	176.5
Nov .....	22.2	41.2	70.9	50.1	8.7	49.8	60.3	124.0	184.3
Feb 1984 .....	24.0	39.8	68.5	52.2	9.0	47.8	58.6	125.7	184.4
May .....	23.1	38.9	72.4	53.7	9.0	50.7	61.5	126.6	188.1
Aug .....	22.4	38.9	71.4	54.3	9.6	49.6	61.1	125.9	186.9
PERSONS ('000)									
Aug 1983 ....	93.0	84.9	104.6	148.3	36.8	104.6	148.6	282.2	430.7
Nov .....	94.0	89.2	107.8	151.8	37.1	105.7	150.5	292.1	442.6
Feb 1984 .....	96.9	86.2	103.0	155.3	37.4	101.8	147.2	294.2	441.4
May .....	96.7	84.8	110.3	158.5	37.0	106.5	151.8	298.5	450.3
Aug .....	95.1	85.9	110.0	159.7	37.7	105.3	151.2	299.4	450.7

## UNEMPLOYMENT

## Labour Force Surveys

Estimates of unemployment are derived from the monthly population survey. Until February 1978, surveys were conducted quarterly in February, May, August and November each year. From February 1978, the surveys have been conducted on a monthly basis.

The following table contains estimates of the number of unemployed persons in South Australia with the corresponding unemployment rates, and the standard error of each estimate. For an explanation of the standard error, see page 285.

## Unemployed Persons, South Australia

	Number ('000)					Unemployment Rate (Per Cent) (a)				
	Looking for Full-time Work			Looking for Part-time Work	Total	Looking for Full-time Work			Looking for Part-time Work	Total
	Aged 15-19 Years	Aged 20 Years and Over	Total			Aged 15-19 Years	Aged 20 Years and Over	Total		
August										
1982 .....	14.6	28.3	42.9	7.7	50.6	26.5	6.5	8.8	6.8	8.4
1983 .....	13.8	43.6	57.3	6.6	63.9	27.9	9.9	11.7	6.0	10.6
1984 .....	15.9	36.2	52.1	6.5	58.7	27.7	8.7	10.8	6.5	9.5
STANDARD ERROR OF ESTIMATE (b)										
1982 .....	1.0	1.3	1.5	0.8	1.6	1.7	0.3	0.3	0.7	0.3
1983 .....	1.0	1.6	1.7	0.8	1.8	2.1	0.3	0.3	0.7	0.3
1984 .....	1.1	1.5	1.6	0.8	1.7	2.0	0.3	0.3	0.6	0.3

(a) The unemployment rate for any group is the number unemployed expressed as a percentage of the labour force (i.e. employed plus unemployed) in the same group.

(b) A guide to the standard errors of annual movements may be obtained by multiplying the standard errors of estimates by 1.4.



For the purpose of the survey, unemployed persons are those aged fifteen years and over who were not employed during the survey week and:

- (a) had actively looked for full-time or part-time work at any time in the four weeks up to the end of the survey week and;
  - (i) were available for work in the survey week, or would have been available except for temporary illness (*i.e.* lasting for less than four weeks to the end of the survey week); or
  - (ii) were waiting to start a new job within four weeks from the end of the survey week and would have started in the survey week if the job had been available then; or
- (b) were waiting to be called back to a full-time or part-time job from which they had been stood down without pay for less than four weeks up to the end of the survey week (including the whole of the survey week) for reasons other than bad weather or plant breakdown.

Further details may be obtained from the following bulletins: *The Labour Force—Australia (Preliminary)* (Catalogue No. 6202.0); *The Labour Force—Australia* (Catalogue No. 6203.0). In addition, *Labour Force—South Australia* (Catalogue No. 6201.4) contains detailed figures for South Australia.

### JOB VACANCIES

Estimates of the number of job vacancies are derived from quarterly sample surveys of employers which are conducted by telephone. In November 1983 a new sample based on the ABS register of businesses replaced the sample selected from lists of employers subject to payroll tax and lists of government organisations and hospitals. Because of the substantially improved coverage of employers provided by the ABS register and a new and larger sample, results from the new survey are not comparable with previous surveys. Results from both the old and new surveys, conducted during November 1983, are shown in the table below. As the estimates are based on information obtained from a sample of employers rather than a full enumeration, they are subject to sampling variability.

#### Job Vacancies, South Australia

November	Manufacturing (a)	Other Industries (b)	Total Vacancies	Job Vacancy Rate
		'000		Per cent
1981 .....	0.8	(c)	(d)2.0	(d)0.5
1982 .....	0.2	0.6	0.8	0.2
1983 old .....	0.3	(d)1.0	1.3	0.3
1983 new .....	(d)0.4	1.8	2.1	(d)0.5
1984 .....	(d)0.5	1.7	2.2	0.5

(a) Australian Standard Industrial Classification (ASIC) Division C.

(b) ASIC Division A-L excluding Division C (Manufacturing), Subdivisions 01, 02 (Agriculture, etc.), 94 (Private Households Employing Staff) and defence forces.

(c) Standard error greater than 20 per cent but less than 30 per cent.

(d) Subject to sampling variability too high for most practical uses.

Further information may be found in the bulletin *Job Vacancies, Australia* (Catalogue No. 6231.0)

### EMPLOYMENT SERVICES

The Commonwealth Employment Service (CES), administered by the Department of Employment and Industrial Relations (DEIR), began operations in South Australia in May 1946. Its main function is to assist people seeking employment to obtain positions best suited to their training, experience, abilities and qualifications; and to assist employers seeking labour to obtain employees best suited to the demands of the employers' particular class of work. The central labour market objective of the Federal Government through the framework of its overall economic policy, is to achieve as high a level of employment as possible. Labour force programs play an important role in the creation of worthwhile employment opportunities for the more disadvantaged job seekers, and complement the Government's broader economic strategy. The DEIR has a wide range of labour force and training programs which have been developed to meet these objectives. They are flexible and designed to meet the special needs of individuals and employers. The following programs were in place at the end of 1984:

- the Community Employment Program (CEP) provides short-term grants to local authorities, community organisations and State/Territory and Commonwealth departments and authorities so they may develop labour-intensive projects which provide appropriate temporary job opportunities for the long-term unemployed, while helping to improve community facilities and services. Priority is given to projects which are suited to the employment of members of groups who are disadvantaged in the labour market such as Aboriginals, migrants with English language difficulties and the disabled; projects which help develop marketable job skills; projects in areas of high unemployment; and projects which will lead to permanent jobs being created after CEP funding ceases. Half the jobs are intended for women. A unique feature of the program is that the sponsor must contribute a minimum level of funds (30 per cent for State/Territory Governments and 20 per cent for the local governments and community organisations) towards project costs. Under the program, the CES is responsible for referring people to jobs, selecting from those who have been registered for full-time work for the immediate past three months. Priority is given to registrants who have never worked, who have been out of work for nine or more months, or who fall within one of the other identified target groups of the program;
- the Labour Adjustment Training Arrangements recognise the special employment problems faced by workers in designated instances of large scale retrenchments concentrated in particular industries or areas. During 1983-84 assistance was continued for steel industry workers at Whyalla;
- the Skills in Demand program assists industry to overcome skilled labour shortages and to develop new or improved training arrangements, while at the same time providing suitable unemployed people with stable employment;
- unemployed people registered with CES can receive General Training Assistance to undertake approved training courses in occupations in which there is a reasonable chance of employment on completion of training;
- the Industry Training Services Program aids and stimulates the development of training through all sectors of industry and commerce, including small business;
- the Commonwealth Rebate for Apprentice Full-time Training (CRAFT) provides

employers with an incentive to maintain or increase the number of apprentices they employ and to improve the quality of training. Employers who take on apprentices can receive rebates, which are generally tax exempt;

- the Community Youth Support Scheme (CYSS) aims to encourage communities to assist local unemployed young people under the age of 25 years through developing their capacity for obtaining and retaining employment, and also by helping them become more self-reliant during periods of unemployment;
- in addition to CRAFT, Special Apprentice Training Schemes are designed to encourage improvements in the quantity and quality of apprentice training, including the Group Apprenticeship Support Program, the Special Trade Training Program, the Special Assistance Program (SAP), the Group One Year Apprentice Scheme, and the Pre-Apprenticeship Allowance;
- the Volunteer Youth Program (VYP) is designed to assist unemployed young people maintain and develop their capacity for obtaining employment through their participation in voluntary community service activities;
- the Community Youth Special Projects (CYSP) provides assistance to community organisations which develop full-time structured employment-related training opportunities, combining vocational courses, life skills, personal development, remedial education and work experience for unemployed young people most disadvantaged in the labour market;
- a wide range of services and training is provided under Special Training Programs for the physically and mentally handicapped to assist them find employment.

As well as the Job Creation Unit of the South Australian Department of Labour, which administers the Commonwealth funded job creation programs through a joint secretariat with the DEIR, the State Government is involved in the following programs designed to alleviate unemployment:

- the Community Improvement Through Youth (CITY) assists young unemployed people to gain skills and confidence through the planning and management of community service projects;
- the Self Employment Ventures Scheme provides advice and launching capital to unemployed people with a viable proposition for establishing self-employment;
- the Home Assistance Scheme provides employment opportunities, through Local Government, to the unemployed by a program of upgrading the dwellings of people judged to be in need;
- the Group Apprenticeship Scheme, a joint State and Commonwealth Government venture, funds the administration costs of private industry groups' apprenticeship schemes. The metal, building, automobile and hotel industries have been assisted;
- the Special Employment Initiatives Unit investigates initiatives such as the establishment of community based worker co-operatives and mechanisms by which the Government could support such co-operatives and programs to assist the unemployed, particularly those aged forty-five years or more.

There are also a number of private employment agencies, all of which are required to register with the Department of Labour. At December 1984 there were thirty-seven such agencies registered.

## 7.2 ARBITRATION AND INDUSTRIAL ORGANISATIONS

### INDUSTRIAL ARBITRATION

In Australia a unique system of conciliation and arbitration by Government tribunals has been developed, with the Commonwealth and the State Parliaments each passing their own industrial legislation.

Under Section 51 of the Constitution, the Commonwealth Parliament may make laws in relation to 'conciliation and arbitration for the prevention and settlement of industrial disputes extending beyond the limits of any one State'. In addition the Parliament may legislate under certain industrial powers for the stevedoring industry, the maritime industry, the Australian Public Service, certain national projects, the Snowy Mountains Area and flight crew officers. Commonwealth arbitration is binding only on the parties to a dispute and decisions need not be of general application to an industry.

Employees not specifically covered by Federal awards are subject to State industrial jurisdiction, but where an award or determination of a State industrial tribunal is inconsistent with an award of a Federal tribunal, the latter prevails to the extent of the inconsistency.

#### Federal Industrial Tribunals

Before 1956 a Court of Conciliation and Arbitration was responsible for the prevention and settlement of industrial disputes extending beyond the limits of any one State. In that year substantial amendments were made to the Conciliation and Arbitration Act separating the judicial and arbitral functions of the Court by the establishment of the Australian Industrial Court and the Australian Conciliation and Arbitration Commission.

In February 1977 a further change was made when the jurisdiction exercised by the Industrial Court was transferred to the Industrial Division of the Federal Court of Australia.

The Conciliation and Arbitration Commission comprises a President and as many Deputy Presidents and Commissioners as are necessary.

The Commission carries out its functions of conciliation and arbitration through panels. The President assigns an industry or a group of industries to a panel consisting of a Presidential Member and one or more Commissioners.

Certain matters cannot be determined by a single member of the Commission. Those matters which must be determined by a Full Bench of at least three members of the Commission, consisting of at least two Presidential Members, include standard hours, national wage cases, the minimum wage, equal pay principles, annual leave and long service leave.

#### State Industrial Tribunals

The South Australian legislation governing State intervention in industrial relations is the Industrial Conciliation and Arbitration Act, 1972-1984, the principal Act having come into operation on 1 January 1973. This Act provides for:

- (a) an Industrial Court which deals with questions of law, interpretations of awards and industrial agreements, claims for sums of money due to employees, re-employment matters, industrial offences and a number of other matters;
- (b) an Industrial Commission which makes awards covering workers not under the jurisdiction of Conciliation Committees and which has jurisdiction to hear and settle disputes, certain demarcation matters and re-employment matters;
- (c) Conciliation Committees which make or vary awards for an industry or area of the State in relation to which each Committee is appointed.

The Commission is composed of a President, six Deputy Presidents and four Commissioners. Arbitral functions of the Commission may be exercised by a Presidential Member or a Commissioner as directed by the President. The Registrar and other officers of the Court and Commission are appointed under the Public Service Act.

The Commissioners are Chairmen of Conciliation Committees consisting of an equal number of representatives of employers and employees. If the process of conciliation before a Committee fails then the Chairman sits as a Commissioner to determine the unresolved matters.

The Industrial Court is composed of the President and Deputy Presidents in their capacity as judges as well as five Industrial Magistrates.

Proceedings before the Industrial Commission may be commenced by an application submitted by:

- (a) the Minister of Labour;
- (b) an employer, or employers, of not less than twenty employees or 75 per cent of the employees within an industry, whichever is the lesser;
- (c) a group or registered association consisting of not less than twenty employees or 75 per cent of the employees within an industry, whichever is the lesser.
- (d) a registered association of employers, the members of which employ not less than twenty employees or not less than 75 per cent of the employees within an industry whichever is the lesser.
- (e) a registered association of employees, of which association not less than twenty members, all employees within an industry, or not less than 75 per cent of the employees within an industry are members, whichever is the lesser.

The Commission will not entertain an application under (b) or (c) unless it is satisfied that it is in the public interest to do so.

Employer or employee associations may apply for registration which confers a legal corporate status and allows ready access to the Commission.

Further details regarding State Industrial Tribunals may be found in the *South Australian Year Book* 1977 and in the Annual Report of the Industrial Court and Commission.

## EMPLOYEE ORGANISATIONS

At 31 December 1983 there were 141 separate unions operating in South Australia and of these 69 were registered with the South Australian Industrial Commission. Although a number of unions exist only in this State, branches of interstate or federated unions account for the majority of total membership. Some of these are bound under a system of unification with centralised control while others are practically independent and self-governing, the federal bond existing only for limited specified purposes.

The central labour organisation for the State is the United Trades and Labor Council of South Australia, founded in 1884. Combined union councils exist for Mount Gambier, Port Augusta, Port Lincoln, Port Pirie, the Upper Murray, Leigh Creek, Whyalla and Yorke Peninsula. These central organisations, together with individual unions are affiliated with the Australian Council of Trade Unions (ACTU). All major unions are affiliated with the ACTU, which was founded at an All-Australian Trade Union Congress in 1927. The United Trades and Labor Council is the State branch of the ACTU and appoints one representative to the executive of the ACTU.

The following table gives particulars of the number of separate unions and union membership and estimated percentages of trade union members to total employees.

## Trade Unions, South Australia, At 31 December

Year	Separate Unions	Members			Proportion of Members to Total Employees		
		Males	Females	Persons	Males	Females	Persons
	No.		'000		Per cent		
1978 (a) .....	142	191.4	78.9	270.4	66	43	57
1979 .....	142	191.1	81.1	272.2	66	47	59
1980 .....	143	186.3	85.3	271.6	65	49	58
1981 .....	141	178.0	85.1	263.1	62	48	56
1982 .....	143	176.0	82.7	258.7	62	47	57
1983 .....	141	174.3	83.5	257.8	63	45	56

(a) Figures for 1978 are based on Civilian Employees estimates and from 1979 are based on estimates from the Labour Force Survey.

Further details are contained in the bulletin *Trade Union Statistics—Australia* (Catalogue No. 6323.0).

A historical summary of the growth of the trade union movement in South Australia was included on pages 280-1 of the *South Australian Year Book* 1969.

## EMPLOYER ORGANISATIONS

At the end of December 1983 there were eleven associations of employers registered with the South Australian Industrial Commission. In industrial matters four are dominant:

- (a) the Chamber of Commerce and Industry (SA) Inc. has individual members who subscribe directly to the Chamber for the industrial and other services provided. Where appropriate, members are grouped into trade associations. The Chamber's industrial advocates represent members in the making and variation of awards, and assist members in the settlement of disputes. The Chamber monitors Bills presented to the Parliaments and, where appropriate, makes representations on behalf of its members seeking amendments to legislation. Other services include trade and tariff advice, trade promotion, trade missions, specialised services for small businesses, and the provision of a range of industry-based training functions. It conducts the Adelaide International Expo and other special exhibitions;
- (b) the Metal Industries Association, South Australia represents the varied interests of the State's metal and engineering industry in all facets of industrial relations, education and training (including a group apprenticeship scheme), trade, economic and legislative matters;
- (c) the South Australian Automobile Chamber of Commerce Inc. is an industrial organisation aimed at representing the interests of employers in the motor industry, both in the retail sector, with over fifteen trade associations and in the distribution and manufacturing sectors. Services provided include manpower development and education, apprenticeship selection and testing, industrial relations, technical and trade advice;
- (d) the South Australian Employers Federation Inc. has as members, both individual employers and trade associations. Services provided include the preparation and presentation of cases before industrial tribunals, advice as to legal obligations and award provisions, the negotiation and drafting of industrial agreements and dispute settlements. It also plays a unique role in co-ordinating industrial relations for major construction projects in the State.

## INDUSTRIAL DISPUTES

Estimates of industrial disputes are compiled from data obtained from employers, trade unions and government authorities. The statistics relate only to disputes involving stoppages of work of ten man-days or more at the establishments where the stoppages occurred. Effects on other establishments because of lack of materials etc are excluded. Details of the total number and extent of industrial disputes occurring in South Australia are shown in the following table.

Industrial Disputes, South Australia

Year	Disputes	Workers Involved	Working Days Lost	
			Total	Per Thousand Employees
	No.	'000	'000	No.
1979 .....	96	92.5	186.5	402
1980 .....	94	24.2	59.4	132
1981 .....	126	67.0	158.8	320
1982 .....	98	34.7	66.6	102
1983 .....	84	15.8	87.7	115
1984 .....	80	15.3	25.2	56

Particulars of all disputes in progress during the year are included in the annual figures. Consequently, details of the number of disputes and of workers involved in the disputes which commenced in any year, and were still in progress during the following year, are included in the figures for both years. Working days lost are included in the appropriate year. Workers involved in more than one dispute during the year are counted once for each dispute. Workers laid off at the establishments where the stoppages occurred, but who are not themselves parties to the dispute are included. Estimates of working days lost per thousand employees have been calculated by using estimates of employees from the labour force survey which exclude those employed in agriculture, etc and those employed in private households. Because of difficulties in identifying all participants in every dispute the statistics should be regarded as giving only a broad measure of the extent of work stoppages.

Further details may be found in the bulletin *Industrial Disputes—Australia* (Catalogue No. 6322.0).

## 7.3 WAGES AND HOURS

### WAGES

Before the National Wage Cases of 1967, wages consisted of two distinct elements, a basic or living wage and a margin or loading which was appropriate to the employee's occupation. A more detailed description of these elements was included on pages 253 and 257-8 of the *South Australian Year Book* 1967.

The total wage concept was accepted by the decision of the Conciliation and Arbitration Commission in June 1967. The application of this concept (until the introduction of wage indexation guidelines in 1975) limited the number of national wage cases in any year to one and provided the Commission with a flexible basis for decisions.

### National Wage Fixation

The *Conciliation and Arbitration Act 1904* gives the Australian Conciliation and Arbitration Commission power to make an award or to certify an agreement 'making provision for, or altering, rates of wages, or the manner in which rates of wages are to be ascertained, on grounds predominantly related to the national economy and without examination of any circumstance pertaining to the work upon which, or the industry in which, persons are employed'. The Commission holds wage inquiries from time to time with its findings applicable to industrial awards within its jurisdiction. A detailed account of the history of national wage fixation before the introduction of the total wage concept appears in the Arbitration Reports and a summary was included on pages 257-60 of the *South Australian Year Book* 1968.

In the 1975 National Wage Case, principles were adopted which included indexing award wages to changes in the Consumer Price Index (CPI). The system operated until July 1981 when it was abandoned. For details of wage changes during indexation see page 325 of the *South Australian Year Book* 1982.

From July 1981 until December 1982 the Commission dealt with applications as filed and the various provisions of the Conciliation and Arbitration Act applied. Claims were dealt with on an award by award basis. Most were varied by consent involving diverse pay increases and in some cases shorter hours of work. In the December 1982 National Wage Case a six month wage pause from further general increases in labour costs was adopted. The Commonwealth Government also legislated a twelve month wage freeze for its employees.

On 28 June 1983 the Commission ruled that the pause should continue until altered or rescinded by the Full Bench. During May and June a number of unions made applications for an adjustment to wages and salaries to compensate for movements in the CPI and to provide for a centralised system of wage fixation. The applications were made against the background of the Accord between the ALP and the ACTU, the National Economic Summit Conference and the Conference convened by the Commission. On 23 September 1983, the Commission announced a return to a centralised system of wage fixation based on a comprehensive set of principles to deal with claims for pay and conditions. The major principles provided for:

- *prima facie* full adjustment of wages and salaries each six months for movements in the CPI;
- no increase for productivity before 1985;
- before any award is varied every union party to that award was required to give a public and unequivocal commitment to the principles. The principles were to apply until October 1985.

In decisions of 23 September 1983 and 4 April 1984 the Commission awarded national wage increases of 4.1 per cent representing full indexation for 1983. On 5 September 1984 it was announced that as a result of an agreement between the parties no applications were made in relation to the negative movement in the CPI for the combined March and June quarters of 1984. Subsequently on 3 April 1985 an increase of 2.6 per cent was granted to cover the 2.7 per cent increase in the CPI for the combined September and December quarters of 1984 and the negative movement for the combined March and June quarters of 1984.

### State Wage Fixation

For many years award fixation in South Australia was based on a living wage plus a margin for skill but, since September 1975 wages have been fixed on the basis of a total wage. In 1967 the concept of a minimum wage for adults was introduced into State



awards and this has been the same as the minimum wage in Commonwealth awards. For many years the Full Commission granted flow-ons of the Commonwealth national wage determinations annually but as from May 1975, the concept of quarterly wage indexation was introduced. In December 1975, the Full Commission adopted the Commonwealth wage indexation guidelines but reserved the right to deal with anomalous situations outside the scope of wage indexation. Details of wage changes during indexation from 1975 to 1981 can be found in the *South Australian Year Book* 1984.

The Full Commission rescinded its wage indexation guidelines from 31 July 1981. Since the rescission of the guidelines claims have been considered under the normal principles of comparative wage justice and under the provisions of the Industrial Conciliation and Arbitration Act and the Temporary Provisions Act. The latter two acts were amended on 31 August 1981 to make industrial authorities pay due regard to the public interest and the state of the economy in arriving at determinations affecting remuneration and working conditions.

Following a decision by the Australian Conciliation and Arbitration Commission on 23 December 1982, the South Australian Industrial Commission in a decision on 20 January 1983, brought into effect a six months wage freeze in respect of wages and salaries for the 40 per cent (approximately) of the South Australian workforce under State Industrial Awards and Agreements. The freeze was to remain in force until 30 June 1983 and thereafter until altered or rescinded by the National Wage Bench of the Australian Commission. The State guidelines followed the Federal guidelines almost to the letter. However the South Australian guidelines gave a limited number of unions more scope to claim exceptions for pay rises than is possible under the Federal guidelines. The Commission also gave employers more room to manoeuvre in opposing pay rises in the areas which have not received increases equivalent to the metal industry standard since indexation was abandoned.

Following a decision by the Australian Conciliation and Arbitration Commission to reintroduce centralised wage fixation, the South Australian Industrial Commission on 11 October 1983 adopted the Federal principles in regard to their essential spirit and intent and made only minor changes to adapt to South Australian situations. It also flowed on the 4.3 per cent national wage increase to State awards. Subsequently the increases of 4.1 per cent and 2.6 per cent also flowed on to State awards in decisions of 10 April 1984 and 11 April 1985 respectively.

Applications for awards and variations to awards are commenced by summons filed in the Registry. The President usually assigns the application to a member of the Commission for hearing and determination.

Proceedings before Conciliation Committees are commenced by requisition to the Chairman of the Committee. Conciliation Committees have power to make awards by way of 'round table' discussion and conciliation rather than by a first instance resort to an arbitral tribunal. If the Committee cannot agree to a matter then the Chairman refers the matter to a normal Commission hearing before himself for arbitration and eventual decision. At 30 June 1984 there were 188 State awards, thirty-eight Conciliation Committee awards and 327 registered industrial agreements in existence.

### **Equal Pay**

In a decision handed down on 15 December 1972, the Full Bench of the Australian Conciliation and Arbitration Commission decided to enlarge the concept of 'equal pay for equal work' to that of 'equal pay for work of equal value', i.e. award rates for all work should be considered without regard to the sex of the employee. The new principle is applied to all awards of the Commission. However, it was considered that the social and economic consequences of the decision would be wide-ranging and so under normal

circumstances implementation would take place by three equal instalments so that one-third of any increase was payable no later than 31 December 1973, half of the remainder by 30 September 1974 and the balance by 30 June 1975. Under principles established in 1969, equal pay was to be given for equal work and the decision was not intended to rescind those principles under which females could become entitled to equal pay earlier than they would under the December 1972 decision.

In the 1972 decision, the Commission rejected the claim that adult females be paid the same minimum wage as adult males because of the family considerations involved in male minimum wages. However, in the 1974 National Wage Case the Commission discarded the family component concept and decided to extend the male minimum wage to females in three stages, the rates for both males and females becoming equal from the beginning of the pay-period in which 30 June 1975 occurred.

Following an amendment to the Industrial Conciliation and Arbitration Act, the concept of a separate State living wage for both males and females was abolished by a decision of the Full Bench of the South Australian Industrial Commission handed down on 5 September 1975.

A historical discussion on the relativities of male and female wage rates was included on pages 290-2 of the *South Australian Year Book* 1970.

### Award Rates of Pay

The minimum weekly amounts provided in awards, determinations, and registered agreements under Commonwealth and State jurisdiction are known as award rates. Weighted averages of minimum weekly rates of pay have for many years been published as Wage Rate Indexes. From September 1982 the Wage Rate Indexes were replaced by a new and more comprehensive series of Award Rates of Pay Indexes. The scope was broadened to include salary earners although a wage earner series is available for comparison with the old Wage Rate Index. The new series has been rebased to June 1976 using data from the May 1976 Survey of Employee Earnings and Hours. For the purpose of constructing the indexes wage earners are defined as those engaged mainly in manual work and/or employed in blue collar occupations while salary earners are those engaged mainly in non-manual work and/or employed in white collar occupations. Remuneration for wage earners is usually stated in terms of a weekly wage while for salary earners it is an annual salary. Excluded from the indexes are employees in the defence forces, agriculture, services to agriculture and private households.

### Index of Weekly Award Rates of Pay: Wage and Salary Earners, Industry, South Australia At 30 June

(Base of Index: June 1976 = 100.0)

Industry	1980	1981	1982	1983	1984
ADULT MALES					
Mining .....	133.2	153.6	183.8	189.2	205.2
Manufacturing: .....	140.1	158.1	184.9	188.3	205.2
Food, beverages and tobacco .....	140.3	158.2	174.2	179.3	201.1
Chemical, petroleum and coal products .....	136.8	153.9	180.5	189.1	206.0
Metal products, machinery and equipment ....	141.7	159.1	190.3	191.4	207.8
Transport equipment .....	139.8	156.5	188.8	189.3	205.5
Other manufacturing (a) .....	137.6	157.7	182.0	187.3	203.4
Electricity, gas and water .....	138.3	157.6	179.2	187.2	199.8
Construction .....	147.5	169.1	192.6	205.4	225.9
Wholesale trade .....	138.2	158.7	180.3	188.8	206.5
Retail trade .....	138.6	157.4	180.0	187.2	204.7
Transport and storage .....	137.2	153.8	180.0	184.3	200.2

**Index of Weekly Award Rates of Pay: Wage and Salary Earners, Industry, South Australia**  
**At 30 June (continued)**  
**(Base of Index: June 1976 = 100·0)**

Industry	1980	1981	1982	1983	1984
<b>ADULT MALES (continued)</b>					
Communication .....	137·9	157·5	182·2	190·2	206·5
Finance, property and business services .....	135·0	152·7	167·5	180·6	196·1
Public administration and defence (b) .....	133·9	153·6	167·2	176·1	196·9
Community services .....	131·3	154·0	171·1	180·2	202·6
Recreation, personal and other services .....	136·1	152·3	156·7	172·3	187·0
All industries (c) .....	138·5	157·6	179·9	187·0	204·8
<b>ADULT FEMALES</b>					
Manufacturing: .....	137·7	158·6	180·6	186·7	203·4
Metal products, machinery and equipment ....	138·9	157·9	186·7	188·9	205·1
Retail trade .....	133·5	155·6	173·3	179·9	197·6
Finance, property and business services .....	133·6	152·6	169·0	180·8	196·3
Public administration and defence (b) .....	132·7	151·3	164·4	170·7	202·3
Community services .....	132·5	155·2	173·0	182·7	204·7
Recreation, personal and other services .....	137·1	155·0	167·1	182·9	198·6
All industries (c) .....	134·7	155·8	174·2	182·6	202·3

(a) Includes wood, wood products and furniture, non-metallic mineral products and miscellaneous manufacturing.

(b) Excludes members of the permanent defence forces.

(c) Excludes members of the permanent defence forces, employees in agriculture, services to agriculture and in private households.

**Index of Weekly Award Rates of Pay: Wage and Salary Earners**

**Federal and State Awards, South Australia**

**(Base of Index: June 1976 = 100·0)**

June	Federal Awards		State Awards	
	Adult Males	Adult Females	Adult Males	Adult Females
1979 .....	128·6	128·8	128·4	126·7
1980 .....	140·1	138·9	137·2	133·1
1981 .....	157·8	157·4	157·1	154·8
1982 .....	184·2	180·2	176·6	172·7
1983 .....	190·6	187·5	184·1	181·4
1984 .....	206·6	203·8	203·4	202·0

Further details may be found in the bulletin *Award Rates of Pay Indexes—Australia* (Catalogue No. 6312·0).

**EARNINGS**

Various measures of earnings of employees are available, the principal of which is the quarterly average weekly earnings series. For many years estimates were derived from particulars of employment and wages and salaries recorded on payroll tax returns, from other direct returns and from estimates of the unrecorded balance. Particulars of wages and salaries were not available for males and females separately and average earnings were expressed in terms of 'male units'. Male units represented total male employees plus a proportion of female employees based on the approximate ratio of female to male average earnings. Because of this and other deficiencies in the payroll tax based

estimates, a sample survey of employers was introduced from September quarter 1981. Information on earnings in respect of a specified pay week generally at or about the middle of each quarter is sought. Data are sought at a finer level of disaggregation in each December quarter survey. The sample is drawn from the ABS register of businesses and the survey results are subject to sampling error.

**Average Weekly Earnings of Employees, South Australia**

Quarter	Males			Females		
	Full-time Adults		All Males	Full-time Adults		All Females
	Ordinary Time	Total		Ordinary Time	Total	
	Dollars					
September 1983 .....	341.40	360.40	326.70	281.70	286.80	212.80
December .....	350.20	375.40	340.10	293.00	300.20	224.60
March 1984 .....	359.50	381.70	351.90	295.50	301.40	222.20
June .....	370.90	393.10	364.00	308.20	315.10	234.30
September .....	376.20	398.20	364.50	313.10	320.30	233.80
December .....	379.70	406.50	360.90	318.10	324.00	229.50

Because of the differences in coverage, concepts, and methodology between the old and new series it is difficult to make direct comparisons. For users who wish to obtain movements in earnings for a period which spans the old and new series a link is available between the new 'all males' series and the old 'male units' series.

For more information on the survey, see *Average Weekly Earnings—Australia* (Catalogue No. 6302.0).

An indication of the likely distribution of earnings among employees is obtained from another employer based survey of Earnings and Hours of Employees. This survey was conducted in May of each year until 1981, when the frequency was reduced to biennial. In this survey a selected sample of employers complete individual returns for a random sample of their employees in accordance with instructions supplied by the Australian Bureau of Statistics.

The following table shows the estimated distribution of gross weekly earnings for a selected week in the month of May in 1980, 1981 and 1983. Earnings include one week's proportion of payments made other than on a weekly basis and excludes pay in advance, retrospective pay and annual or periodic bonuses.

Also shown are the mean and median earnings. The median earnings is the amount which divides the distribution into two equal groups, one having earnings above the median and the other having earnings below it.

For details of the standard errors involved and for more information on the survey, see *Earnings and Hours of Employees, Distribution and Composition—Australia* (Catalogue No. 6306.0).

Another indication of the likely distribution of earnings of all persons aged 15 years and over who were employed as wage or salary earners in their main job is obtained from the household based survey conducted in August in conjunction with the labour force survey, see *Weekly Earnings of Employees (Distribution)—Australia* (Catalogue No. 6310.0).

## Distribution of Average Weekly Earnings of Employees, South Australia

Weekly Earnings	Proportion of Employees					
	Males			Females		
	May 1980	May 1981	May 1983	May 1980	May 1981	May 1983
	Per cent					
Under \$40 .....	3.3	2.8	3.2	5.4	5.0	4.0
\$40 and under \$80 ..				6.1	6.1	7.5
\$80 and under \$120	3.6	2.7	2.5	12.6	10.0	8.4
\$120 and under \$160	5.2	3.6	3.4	18.2	12.4	8.8
\$160 and under \$200	19.7	10.0	3.1	29.1	21.7	10.6
\$200 and under \$240	24.9	23.2	6.8	14.3	23.7	14.7
\$240 and under \$280	15.7	18.9	16.0	14.4	20.9	27.0
\$280 and under \$320	11.1	13.3	17.8			
\$320 and under \$360	6.1	9.1	13.5			
\$360 and under \$400	4.4	5.0	8.5			
\$400 and over .....	5.9	11.1	25.4			
Total .....	100.0	100.0	100.0	100.0	100.0	100.0
Dollars						
Median weekly earnings .....	228.00	254.00	313.40	171.30	190.80	229.40
Mean weekly earnings .....	242.40	272.90	331.40	169.60	188.40	223.20

## HOURS OF WORK

In September 1947, just before the introduction of the forty hour week, the weighted average standard hours (excluding overtime) for a full working week, as prescribed in awards, determinations and agreements in all industries in South Australia, except rural, shipping, and stevedoring was 43.83 hours for adult males. Following introduction of the forty hour week, which was introduced from January 1948 minimum hours for wage earners changed very little until the nineteen seventies. At June 1976 the figure stood at 39.92 hours. From June 1976 details were also compiled for salary earners and their inclusion reduced the weighted average minimum hours. The coverage and weighting structure of the series also changed. At June 1976 the weighted average for wage and salary earners combined was 39.57 hours for males and 39.40 for females. By June 1984 these figures had reduced to 38.84 for males and 39.08 for females.

The following table shows the relative distribution of employed civilian wage and salary earners in South Australia according to the number of hours worked in a specified week, as recorded in the August labour force surveys. The distribution is based on actual hours worked, including overtime, rather than hours paid for, and is therefore affected by public holidays, leave, absenteeism, temporary absence from work because of sickness, accident and industrial disputes, and work stoppages caused by plant breakdowns and weather.

**Employed Wage and Salary Earners: Hours Worked, South Australia <sup>(a)</sup>**

August	Proportion who Worked the Following Hours in the Specified Week							Total
	0	1-29	30-34	35-39	40	41-48	49 and Over	
	Per cent							
1981 .....	5.1	16.8	6.3	16.0	33.5	13.5	8.8	100.0
1982 .....	5.8	18.9	7.1	19.9	27.8	11.7	9.0	100.0
1983 .....	4.6	18.2	7.4	20.8	26.9	12.6	9.7	100.0
1984 .....	4.5	19.6	8.1	20.2	23.2	14.7	9.8	100.0

(a) Employed civilian population, fifteen years of age and over.

### Overtime

Information about overtime hours worked is obtained from a quarterly sample survey of employers which is conducted by telephone. The surveys are generally in respect of the last week of the pay period ending on or before the third Friday of the survey month. In November 1983 a new sample survey based on the ABS register of businesses replaces the sample selected from the lists of employers subject to payroll tax and lists of government organisations and hospitals. Because of the substantially improved coverage of employers provided by the ABS register and a new and larger sample, results from the new survey are not comparable with previous surveys. Results from both the old and new surveys, conducted during November 1983, are shown in the table below.

For the purposes of the survey, overtime is time worked in excess of award, standard or agreed hours of work for which payment is received. Excluded is any overtime for which employees would not receive payment, e.g. unpaid overtime worked by managerial, executive, etc. staff, normal shiftwork and standard hours paid for at penalty rates. Overtime hours represent the number of hours of overtime paid for.

As the estimates are based on information obtained from a sample of employers rather than a full enumeration, they are subject to sampling variability, one measure of which is the standard error.

### Overtime, South Australia

Quarter	Average Weekly Overtime Hours				Proportion of Employees in the Survey Working Overtime	
	Per Employee in the Survey		Per Employee Working Overtime			
Quarter	Hours	Standard Error	Hours	Standard Error	Per Cent	Standard Error
1981 .....	1.10	0.05	6.07	0.13	18.20	0.72
1982 .....	0.94	0.07	6.42	0.20	14.58	0.83
1983 old .....	0.05	0.08	5.99	0.32	17.52	0.71
1983 new .....	1.20	0.15	6.50	0.47	18.40	1.52
1984 .....	1.31	0.16	7.04	0.62	18.57	1.04

For further information see *Overtime, Australia* (Catalogue No. 6330.0)

## HOLIDAYS AND LEAVE

**Public Holidays**

A number of days are observed each year throughout the State as public holidays and additional days may be proclaimed either on a State-wide basis or applicable to particular localities. Employees required to work on public holidays are paid at penalty rates. Unless elsewhere provided in awards, South Australian Government employees required to work on public holidays are paid a penalty of 150 per cent or 50 per cent and are granted a day in lieu. From 1971 authorised public holidays are:

New Year's Day (1 January or the following Monday if that day falls on a Saturday or Sunday),  
Australia Day (first Monday after 25 January),  
Good Friday,  
Easter Saturday,  
Easter Monday,  
Anzac Day (25 April or the following Monday if 25 falls on a Sunday),  
Adelaide Cup Day (third Monday in May),  
Queen's Birthday (usually observed on a Monday early in June),  
Labour Day (second Monday in October),  
Christmas Day (25 December or the following Monday if 25 falls on a Saturday or Sunday), and  
Proclamation Day (28 December or the following Monday if 28 falls on a Saturday or Sunday).

The Holidays Act, 1910-1980 makes provision for other days to be proclaimed in lieu of the authorised holidays. Additional holidays may also be proclaimed.

**Annual Leave**

Under Federal awards generally, four weeks annual recreation leave is granted to employees who have completed twelve months continuous service. Federal public servants were granted four weeks annual recreation leave from 1 January 1973.

Under State awards the Commonwealth standard of four weeks annual recreation leave has generally been adopted. The South Australian Industrial Commission is empowered to determine a general standard of annual leave for all employees not bound by an award and determined a four weeks standard on 27 June 1974, but that standard has never been officially proclaimed in the Industrial Gazette.

Employees of the South Australian Public Service are entitled to four weeks annual recreation leave. However, with the exception of some employees engaged in essential services, *e.g.* hospitals, motor vehicle registrations, etc., State public servants are required to take three days of their recreation leave between the Christmas and New Year holidays.

Payment in lieu of annual leave or proportionate leave on termination of employment must be made to all employees, whether subject to an award or not, irrespective of the reason for, or manner of, termination of the employment.

Certain employees in special occupations or where regular shift work is involved *e.g.* police officers, nurses, etc., are entitled to annual recreation leave in excess of four weeks.

In 1973 the South Australian Industrial Commission handed down a decision which enabled part-time workers, when taking annual leave, to be paid the normal weekly wage that they would have received had they been at work.

In addition to normal holiday pay many employees receive an annual leave bonus of

17·5 per cent of the payment they would have received had they not been on leave. Officers of the South Australian and the Australian Public Service receive a 17·5 per cent leave loading on their salary up to a maximum of average male weekly earnings for the March quarter of the year ending in June during which the leave accrued (in the case of the South Australian Public Service) and the September quarter of the year ending in December in which the leave accrued in the case of the Australian Public Service. In the South Australian Public Service a shift worker or seven day week worker receives a higher loading of either 20 per cent or the shift penalties forgone while taking leave.

### **Sick Leave**

The Industrial Conciliation and Arbitration Act, 1972-1984 provides that all full-time employees whether bound by an award or not, shall be eligible to receive annually not less than ten days cumulative sick leave on full pay. The Act was amended from February 1982 to enable employees to take sick leave when ill for more than three consecutive days during annual leave. Most Federal awards provide for two weeks sick leave a year.

### **Long Service Leave**

In 1964 the Australian Conciliation and Arbitration Commission included, for the first time in a Federal award, long service leave, granting employees in the graphic arts and metal trades industries leave on the basis of thirteen weeks for twenty years service in respect of employment before the date of the decision, and eight and two-thirds weeks in respect of each ten years of subsequent service; these provisions have been extended to many other Federal awards. In a number of other cases, registered agreements provide for thirteen weeks leave after fifteen years service.

The South Australian Long Service Leave Act, 1967-1972 entitles employees, in respect of continuous service after 1 January 1972, to thirteen weeks leave for each ten years service. In respect of service before 1 January 1972 the entitlement is calculated at the rate of thirteen weeks for fifteen years service for the period 1 January 1966 to 31 December 1971 and at the rate of thirteen weeks for twenty years service for the employment period up to 31 December 1965. The obligation to grant leave is imposed on all employers in South Australia except in regard to employees entitled to long service leave pursuant to an award of the Australian Conciliation and Arbitration Commission. The Industrial Commission has the power to exempt an employer from the provisions of the Act where the employees involved have access to benefits not less favourable than those prescribed by the Act. Other provisions of the Act relate to payment for leave, deferment of leave, claim for leave on termination of employment, and notice of granting of leave.

Entitlement to long service leave also applies to casual employees provided that the service with the employer is continuous within the meaning of the Long Service Leave Act.

State and local government employees are in general entitled to ninety calendar days leave after ten years service which equates to nine days leave per year, and Australian Government employees to three months after ten years service. However, from 1 July 1975, State public servants with over fifteen years continuous service accumulate long service leave benefits at the rate of fifteen days leave per year for each year of service after the fifteenth. The long service leave provisions which apply to State public servants are also extended to teachers employed under the Education Act.

The various long service leave arrangements provide for additional *pro rata* periods of leave for service in excess of the minimum, and for *pro rata* payments for employees



who have completed a specified term of service but who, through the termination of their services or through death, do not complete the full entitlement period.

### **Maternity Leave**

Since 1973 the Australian Public Service has provided maternity leave for its female employees whether permanent or temporary. The current provision is for twelve weeks paid leave and up to fifty-two weeks leave in total in respect of each confinement. A qualifying period applies for the paid leave.

Maternity leave provisions also exist for female employees of the South Australian Public Service. The maximum special leave without pay is fifty-two weeks but leave on full pay to which the officer has an entitlement may be substituted for the special leave.

There are provisions in the Education Act for maternity leave for teachers in the South Australian Education Department with the maximum leave being fifty-eight weeks and the minimum fourteen weeks although these limits may be respectively extended or reduced in special circumstances. Leave is taken without pay except when long service credits are used.

Maternity leave provisions are inserted in most South Australian awards. The South Australian provisions are based on those granted in March 1979 by the Australian Conciliation and Arbitration Commission for Federal awards. The provisions allow women employed full-time or part-time and with not less than twelve months continuous service, to take a minimum of six weeks or a maximum of fifty-two weeks maternity leave. The leave is unpaid, and seasonal and casual workers are not eligible.

### **Parental Leave**

Since April 1984 the South Australian Public Service has provided leave without pay up to a maximum of fifty-two weeks to an employee for the purpose of care or rearing of a child who has not commenced schooling. In the Australian Public Service from January 1985 leave without pay up to a maximum of forty weeks is available in the first sixty-six weeks after the birth of a child to enable parents to share more equally in the responsibility of caring for infants.

## **7.4 INDUSTRIAL SAFETY**

### **SAFETY REGULATIONS AND INSPECTION**

General principles on safety, health and welfare applicable to all employed persons in industry (primary as well as secondary), commerce and in State Government are contained in the Industrial Safety, Health and Welfare Act, 1972-1981. It authorises the making of detailed provisions by regulations for different industries and different processes.

At present most of the legislation directed at industrial safety is administered by the Department of Labour, although other authorities hold responsibilities in certain fields.

#### *Department of Labour*

The general working conditions in industrial premises (factories, shops, offices and warehouses) are regulated by the Industrial Safety Code Regulations and the Commercial Safety Code Regulations. On building and construction sites the Construction Safety Regulations apply. Inspections are made by Departmental officers to ensure that the requirements of the Safety Regulations with respect to safeguarding of machinery, safety of processes, cleanliness and general working conditions on industrial premises and construction sites are being observed.

The registration and inspection of steam boilers and other pressure vessels is provided for under the Boilers and Pressure Vessels Act, 1960-1985. The Lifts and Cranes Act, 1960-1972 regulates the use of lifts, escalators, cranes and hoists, and requires the Department to approve new installations and to inspect regularly existing lift equipment. The Dangerous Substances Act, 1979-1985 regulates the storage of flammable liquids and liquefied petroleum gas and the transport of these and other dangerous substances.

Administration of the Explosives Act, 1936-1982 which regulates the importation, manufacture, carriage, storage, sale and possession of explosives was transferred from the Department of Services and Supply (Chemistry Division) from 1 July 1983. The responsibility includes operation of the government magazines at Dry Creek and the licensing and inspection of other explosives storages. Vehicles used for the carriage of explosives are also licensed while commercial explosives entering the State are subject to inspection.

#### *Department of Mines and Energy*

Regulations under the Mines and Works Inspection Act, 1920-1978 provide for the health and safety of persons engaged in mining, quarrying or associated treatment plants and for the protection of the general public. Mining sites and camps must be maintained in safe condition with specific attention given to ventilation, sanitation, the use of explosives and the protection of the area amenity and environment. All mining operators are required to rehabilitate areas disturbed by mining. The legislation also covers operations conducted by local government authorities and road and rail construction authorities.

Officers of the Department inspect mines and quarries; ensure the operations are conducted in such a manner so as not to endanger the health or safety of the workmen nor to unduly impair the environment, measure dust, noise, radiation and blasting vibrations; give advice and directives on safe practices; investigate accidents and complaints associated with mining activities; check old workings and give advice and assistance to industry and other Government departments on matters pertaining to mining and explosives.

#### *South Australian Health Commission*

Within the Public Health Service of the South Australian Health Commission, the Occupational Health and Radiation Control Branch provides a major service in the areas of research, education, training and consultation. A team of professional people including occupational health physicians and nurses, chemists, industrial hygienists, physicists and ergonomists attempt to address the demands of the community for advice, not only in the specified field of occupational health, but also with respect to a significant number of public and environmental health issues. In particular, there is a strong commitment to the prevention of industrial injury and disease.

From a legislative viewpoint, the Branch is responsible for administering the Radiation Protection and Control Act, 1982 which controls the use of ionising and non-ionising radiation, and the Pesticide Regulations under the Health Act.

#### *Electricity Trust of South Australia*

Consumers' electrical installations are required to conform to the service rules of the Electricity Trust and the wiring rules of the Standards Association of Australia, and are subject to inspection by Trust officers. Persons engaged in installation, maintenance or repair of electrical installations and permanently connected equipment must be licensed to do this work in accordance with the provisions of the Electrical Workers and Contractors Licensing Act, 1965-1985. Under the Electrical Articles and Materials Act, 1940-1967, certain classes of electrical articles and materials may only be sold or hired or

offered for sale or hire if they are of a type approved by the Trust or a recognised interstate authority.

## WORKERS COMPENSATION

### Legislation

Provisions describing assistance for workers sustaining personal injury out of or in the course of their employment are included in the Workers Compensation Act, 1971-1983. The provisions of the Act extend to injuries arising out of or in the course of employment and cover accidents during recess periods, travelling to or from work, travelling to or from or while in attendance at a place of pick up, travelling to or from or attending a trade or technical school, travelling for a medical certificate or medical treatment while on compensation or travelling to seek or receive compensation.

An injury may be physical or mental, including diseases contracted and the aggravation or recurrence of an injury or disease and a pre-existing coronary heart disease.

Compensation is payable when the injury results in death, or in total or partial, permanent or temporary incapacity. Where death results from the injury, the Act provides for payment to members of the family wholly or partly dependent on the earnings of the deceased. For full dependants, compensation will be an amount equal to the sum of the worker's earnings in the six years before the accident plus \$1 000 for each dependent child, with a minimum of \$16 000 and a maximum of \$50 000 (plus \$1 000 per dependent child), as well as funeral expenses to a maximum of \$1 000. If the worker has not been in the same employment for six years the amount will be his average weekly earnings in the job at which he was working at the time of the accident multiplied by 312, with the above maxima and minima. Where a worker dies leaving no dependants, compensation covering medical, funeral (\$1 000 maximum) and other expenses will be paid into the estate.

Where the injury does not result in death, the most common form of compensation is weekly payment. If incapacity is for one week or more compensation is an amount equal to average weekly earnings during the twelve months preceding the incapacity. The maximum liability of an employer is \$36 000, unless the worker is totally and permanently incapacitated, when it is \$50 000. Weekly payments must begin within two weeks of the worker providing the employer with a medical certificate and his declaration in the correct form stating that he believes himself entitled to compensation. Payments must be made to the worker on his usual pay days.

Provision is made for lump sum payments in lieu of weekly payments. Such payments are arranged by agreement or by proceedings in the Industrial Court of South Australia on application of either employer or employee.

Lump sum payments are payable for certain specified injuries *e.g.* loss of limbs, for permanent injuries which may involve total or partial incapacity for work whether actual or potential *e.g.* speech or hearing loss, or no incapacity for work *e.g.* severe facial scarring.

In addition to other compensation, reasonable medical, hospital, nursing, constant attendance, rehabilitation and ambulance expenses are paid and compensation is provided to \$150 for loss or damage to clothing and personal effects and \$300 for loss or damage to tools of trade.

Excluded from the scope of the Act are members of the crews of fishing vessels remunerated by a share in the profits or the gross earnings of the working of such vessels, certain persons who are contestants in sporting or athletic activities, service personnel and Australian Government employees. Compensation for employees of the

Australian Government is provided by the *Compensation (Commonwealth Government Employees) Act 1971*.

#### **Workers Rehabilitation Advisory Unit**

The 1982 amendments to the Workers Compensation Act saw the establishment of a Rehabilitation Advisory Unit within the Department of Labour. Its functions are:

- (a) to assess the prospects for rehabilitation of workers injured badly enough to need help;
- (b) to advise workers on ways to go about rehabilitating themselves;
- (c) to advise employers on the resources they can call on in rehabilitating employees;
- (d) to consult with employers about helping injured employees to get back to work;
- (e) to encourage the establishment of rehabilitation programs by employers.

Employers are obligated to report to the Unit within twenty-one days all cases where the incapacity has lasted longer than twelve weeks. However, a case may be referred at any time to the Unit by the employer, doctor or injured employee.

#### **Workers Compensation Insurance**

The Workers Compensation Act requires every employer, unless specifically exempted, to obtain from a licensed insurance company a policy which fully covers his liability under the Act. The exemptions are the State Government, which provides its own cover through the State Government Insurance Fund, and any employer who can satisfy the Minister of Labour of his ability to meet all probable claims and who is accordingly issued with a certificate of exemption. As at 31 December 1984 exemption certificates were held by forty-eight employers.

During 1982-83, approximately 60 800 claims were lodged under the Workers Compensation Act, 1971-1983, and compensation payments totalling \$110.1 million were made for wages lost, hospital and medical expenses and lump sum settlements. Further details may be obtained from the bulletin *Industrial Accidents—South Australia* (Catalogue No. 6301.4) published by the South Australian Office of the Australian Bureau of Statistics.

### **INDUSTRIAL ACCIDENTS AND DISEASES**

The statistics set out in this section have been compiled from reports of workers compensation claims submitted by insurance companies, self-insurers, and State Government departments, through the South Australian Department of Labour.

Only claims within the coverage of the South Australian Workers Compensation Act, 1971-1983 are included. Notable exclusions are self-employed persons (although persons supplying labour only in contracts have been included from 1 January 1974) and all Australian Government employees. The exclusion of self-employed persons is likely to have considerable effect in industries where self-employment is significant (*e.g.* retail trade, rural industries). Because of the exclusion of Australian Government employees, defence services and Government communications industry groups are not covered, while coverage is reduced in other industries (*e.g.* building and construction). Because of the movement of employees across State boundaries some reports received may refer to accidents occurring in States other than South Australia. The number of such reports is thought to be negligible.

From 1980-81, statistics represent accidents and diseases which occurred during the year, rather than accidents and diseases for which claims were closed during the year as for years before 1980-81. This change follows the introduction of a new reporting system from 1 July 1980 which provides that for events which occur during a year, reports are

to be completed progressively as claims are closed. For claims unclosed three months after the end of the year concerned (*i.e.* at 30 September), insurers are required to submit reports during October and include their estimates of total compensation payments and absence. However, not all relevant reports were received in time for inclusion in the 1982-83 statistics and year to year changes in the number of events should therefore be interpreted with caution.

### Industrial Accidents

An 'industrial accident' is defined as an event following an isolated and sudden exposure to a hazard resulting in a compensatable work injury. For the purpose of this collection, accident claims are included only if they result in death, permanent total disability or absence from work of one week or more.

#### Accidents While Working: Industry, Number and Disability, Average Time Lost and Amount Paid, South Australia, 1982-83

Industry	Number of Accidents					Average Time Lost (a) Weeks	Average Amount Paid (b) \$
	Fatal	Disability			Total		
		Permanent		Tempor- ary			
		Total	Partial				
Agriculture, forestry, fish- ing and hunting .....	3	1	52	602	658	5.9	5 251
Mining .....	—	—	13	163	176	6.6	5 612
Manufacturing .....	4	16	371	3 430	3 821	5.8	5 430
Electricity, gas and water .....	—	2	13	416	431	4.7	3 537
Construction .....	3	5	71	1 022	1 101	6.3	5 798
Wholesale trade .....	2	1	36	546	585	5.2	5 133
Retail trade .....	1	—	50	780	831	4.7	3 972
Transport, storage and communication .....	5	1	45	639	690	5.2	5 582
Finance, property and business services .....	3	—	23	198	224	7.7	8 307
Public administration .....	2	1	43	336	382	5.2	4 671
Community services .....	2	7	73	1 311	1 393	6.0	4 879
Recreation, personal and other services .....	1	1	39	436	477	6.3	4 956
Total .....	26	35	829	9 879	10 769	5.7	5 206

(a) Time lost applies only to cases of permanent partial and temporary disability.

(b) Includes compensation for wages lost, hospital and medical expenses, and lump sum settlements.

In the above table, the workplace of the injured worker is classified to an industry in accordance with the 1978 edition of the *Australian Standard Industrial Classification* (ASIC). Only accidents which occurred while working are included.

### Industrial Diseases

The International Labour Office distinguishes an occupational disease from a work injury in that it exhibits one or more of the following characteristics:

- the slow and protracted nature of its cause;
- its ascribability to repeated or continuous action of a mechanical, physical or chemical nature;

- (c) the indeterminateness of the time of its beginning; and  
 (d) possible individual predisposition as a factor in the development of the condition.

In this collection, where there is any evidence at all that a disease has resulted from an initial injury, the episode is classified as an injury rather than a disease. Disabilities caused by repetitive movement of a joint are classified to a disease if so described or to an injury if no disease has been specified on the report.

The following table gives details of diseases which resulted in death, permanent total disability or absence from work of one week or more.

**Diseases: Number and Disability, Average Time Lost and Amount Paid**  
**South Australia, 1982-83**

Diseases	Number of Diseases					Average Time Lost (a)	Average Amount Paid (b)
	Fatal	Disability		Total	Total		
		Permanent	Temporary				
						Weeks	\$
Infectious and parasitic .....	—	2	1	62	65	5.8	3 043
Mental disorders .....	—	14	9	36	59	11.7	16 670
Nervous system and sense organs .....	—	1	16	55	72	12.1	8 211
Circulatory system .....	9	3	7	20	39	21.0	25 972
Respiratory system .....	—	—	4	16	20	12.5	8 369
Skin and subcutaneous tissue .....	—	—	13	105	118	8.2	5 695
Musculoskeletal system and connective tissue .....	—	15	97	409	521	10.3	10 203
Other .....	—	—	3	13	16	15.1	1 345
Total .....	9	35	150	716	910	10.4	10 061

(a) Time lost applies only to cases of permanent partial and temporary disability.

(b) Includes compensation for wages lost, hospital and medical expenses and lump sum settlements.

In addition, 341 noise-induced hearing loss disease claims involving less than one week's absence from work were reported in 1982-83.

#### *Fatal Accidents and Diseases*

While reservations continue to be held regarding the completeness of reporting of fatal events, the latest available information is set out in the table below.

**Workers Compensation Claims: Fatal Events, South Australia**

Year of Occurrence	Accident			Disease	Total (a)
	While Working	During Journey	During Recess		
1979-80 .....	21	<i>n.a.</i>	<i>n.a.</i>	11	32
1980-81 .....	20	10	—	17	47
1981-82 .....	20	10	—	15	45
1982-83 .....	26	12	—	9	47

(a) From 1980-81 includes 'journey' and 'recess' cases.

#### **Further References**

Additional information may be found in the following publication:

6301.4 *Industrial Accidents—South Australia*

## **PART 8**

# **PHYSICAL DEVELOPMENT**

## **8.1 WATER SUPPLY AND SEWERAGE**

### **WATER SUPPLY**

Water conservation is of vital importance to South Australia as 96 per cent of the State receives less than 500 millimetres of rain a year, while high temperatures encourage a higher use of water and a high rate of evaporation causes heavy losses from reservoirs.

The Waterworks Act, 1932-1984 gives the Minister of Water Resources power to divert and impound the water from any streams or springs and take the water found in or under any lands for the purpose of constructing, completing, extending or maintaining any waterworks or for supplying water to or in any water district. The Act also gives the Minister power to declare any district, place or town a water district. The function of exploiting water resources is performed through the Engineering and Water Supply Department.

In 1973, the State Government announced its new water resources management policy. This statement embraced the same important principles contained in a document *Proposed National Approach to Water Resources Management*, being developed under the auspices of the Australian Water Resources Council and adopted by the Commonwealth and State Governments in 1976.

With the Water Resources Act coming into effect on 1 July 1976, the Control of Waters Act and Underground Preservation Act were repealed.

The Water Resources Act provides for the assessment, conservation, development

and management of the water resources of the State by the Minister of Water Resources and for the control and management of their utilisation, quality and other purposes.

Its provisions include the establishment of a South Australian Water Resources Council, Regional Water Resources Advisory Committees, the Water Resources Appeal Tribunal and a Well Drillers' Examination Committee. Six Regional Water Resources Advisory Committees, River Murray, Padthaway, Northern Adelaide Plains, Arid Areas, North Para and Angas-Bremer have been established.

The Water Conservation Act, 1936-1975 provides for the control of small reservoirs, bores, tanks etc. established in remote areas as emergency water supplies or to assist local development.

The following table gives details of water supplies in South Australia at 30 June for the three years to 1984.

Water Supplies, South Australia			
At 30 June	Aggregate Capacity		
	1982	1983	1984
	Megalitres		
Adelaide Metropolitan reservoirs .....	207 440	202 040	202 070
Country reservoirs .....	33 980	33 980	33 380

It should be noted that storage includes service reservoirs and that both natural intake and River Murray water are stored in Northern and Metropolitan reservoirs. The total length of water mains at 30 June 1984 was 23 152 kilometres.

### Water Filtration

Adelaide's first water filtration plant at Hope Valley began supplying filtered water to the Metropolitan Distribution System in November 1977. Since then, plants have been commissioned at Anstey Hill, Barossa and Little Para. Construction is underway on plants at Morgan and Happy Valley. The Morgan plant is due for completion in late 1986, and the Happy Valley Water Filtration Plant in two stages, in 1988 and 1990 respectively.

## DISTRIBUTION OF WATER RESOURCES

### Drainage Systems

In agreement with the States, the Australian Water Resources Council has divided Australia into twelve surface water drainage divisions. The divisions which constitute major surface water resources for South Australia are the South Australian Gulf Drainage Division which lies wholly within the State and in which are located all important State reservoirs, and the Murray-Darling Division, of which only a part is located in South Australia, and the waters of which are allocated between this State, Victoria, and New South Wales in accordance with the terms of the River Murray Waters Agreement (see page 321).

Part of the large Lake Eyre Drainage Division covers the northern and eastern areas of the State, but, although streams in the area may flood extensively on occasions, they are generally unreliable and significant only to the local pastoral industry. The section of the South-East Coast Drainage Division which intrudes into the south-east corner of South Australia has no good dam sites but a high rainfall in the area provides a good underground water resource of considerable importance to the State. Underground



resources on the seaward edge of the Western Plateau Division, which covers the south-western part of the State, are recharged also from local rainfall.

#### *South Australian Gulf Drainage Division*

The eastern boundary of this Division is formed partly by the Mount Lofty Ranges, which rise to a maximum of 727 metres east of Adelaide and to over 1 000 metres north of Burra, and further north it follows the Flinders Ranges which reach a height of 1 166 metres at St Mary Peak. The boundary then rounds Lake Torrens and, further south, the western boundary is formed by a discontinuous line of hills on Eyre Peninsula. Kangaroo Island is also included, so that in all, the Division covers the whole perimeter of the South Australian gulfs. The individual river basins in this Division are all very small.

Most of the South Australian reservoirs are situated in this Division as can be seen from the map on page 315. The Little Para Dam, constructed on the Little Para River north of Adelaide at a cost of \$11 million, began service in January 1979. The capacity of this reservoir is 20 800 megalitres and the waterspread is 148 hectares. The following table shows the capacity, area at full supply level and the catchment area of the eleven largest reservoirs at 30 June 1984.

**Major Reservoirs, South Australia, At 30 June 1984**

Reservoir	Capacity	Area at Full Supply Level	Catchment Area
	Megalitres	Hectares	km <sup>2</sup>
South Para .....	51 300	444	221
Mount Bold .....	45 900	304	388
Myponga .....	26 800	320	124
Little Para Dam .....	20 800	148	83
Kangaroo Creek .....	19 030	104	289
Millbrook .....	16 500	171	(a)
Happy Valley .....	12 700	187	(a)
Tod River .....	11 300	134	(a)
Bundaleer .....	6 370	85	(a)
Baroota .....	6 120	63	129
Warren .....	4 770	102	119

(a) Offstream reservoir. Water is largely diverted from other catchments.

Rainfall in excess of 750 millimetres a year occurs only on a very small area in the Mount Lofty Ranges, while in the north-west of the Division the annual average is less than 150 millimetres. In the southern parts of the Division, average precipitation generally exceeds potential evaporation only from May to August, and over most of the Division monthly evaporation rates exceed rainfall throughout the year.

The average annual run-off in this Division at the lowest practical dam sites is estimated at 430 000 megalitres but is subject to considerable variation. The two best streams, the Onkaparinga and the Torrens, account for 135 000 megalitres of the average flow and the combined annual flow of these two has varied between 467 000 megalitres down to 8 600 megalitres in the last eighty years.

After the major dam sites in the Mount Lofty Ranges had been developed because of the small size of the individual catchments in the Division, and the relatively low run-off and its high variability, it was found more economical to provide additional water to Adelaide and other high demand centres *via* pipelines from the River Murray. No further reservoirs or major pipelines for metropolitan Adelaide will need to be built this century. When augmentation of the water supply system is necessary in the first part of the next century it is likely that the supply source will be the River Murray, possibly by way of

another pipeline plus a new reservoir in the Mount Lofty Ranges to act as a balancing storage for River Murray water.

The present average annual extraction of water by the Engineering and Water Supply Department from the Gulf Drainage Division is about 130 000 megalitres; private diversion may take a further 13 000 megalitres.

### River Murray

The River Murray is the most important source of water supply for South Australia. Under the terms of the River Murray Waters Agreement (see page 321), South Australia is entitled to 1 850 000 megalitres of water annually, subject to the declaration of restriction by the River Murray Commission. Losses by evaporation and seepage account for about 1 000 000 megalitres per annum. Over the past ten years, irrigation diversions have averaged 410 000 megalitres per annum and town, domestic, industrial and stock supplies have averaged 132 000 megalitres per annum. Town, domestic, industrial and stock supplies have been as high as 234 000 megalitres per annum.

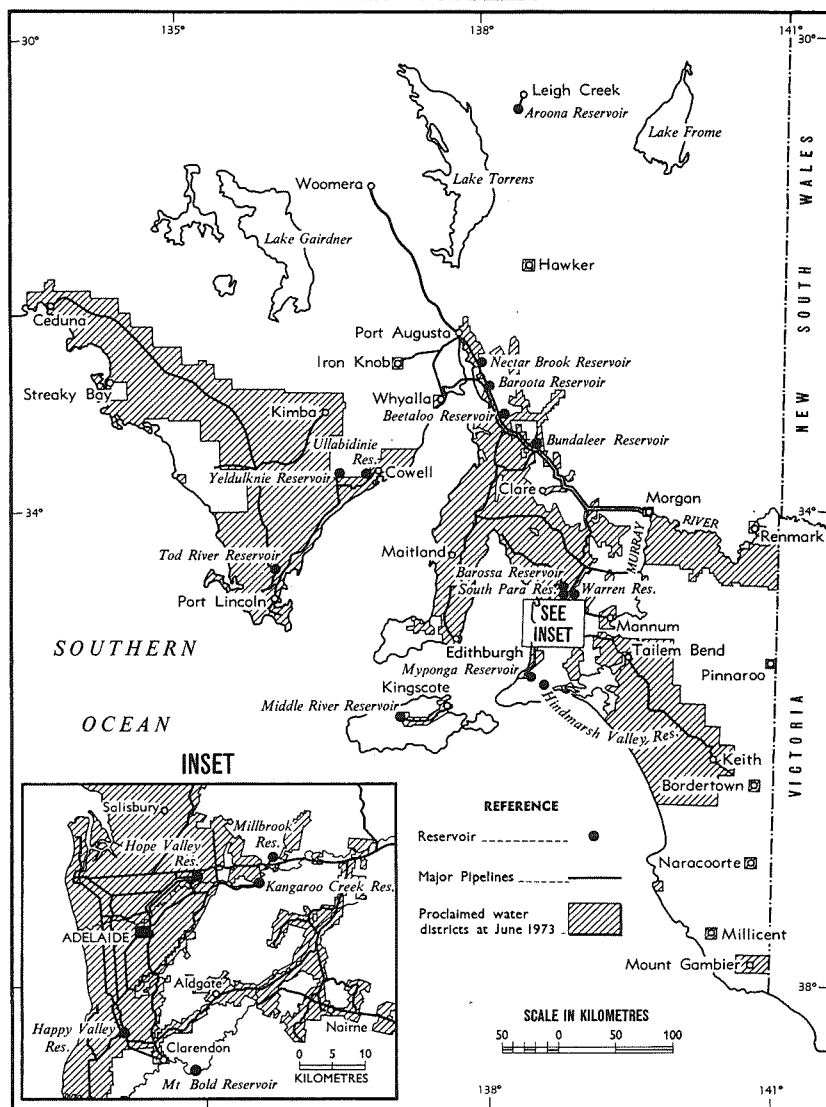
Adelaide metropolitan water supplies are supplemented by River Murray water through the Mannum-Adelaide and Murray Bridge-Onkaparinga pipelines. The Morgan-Whyalla, Swan Reach-Stockwell and Tailem Bend-Keith pipelines provide the water supply for extensive country areas or augment local resources in these areas. The first water pumped through the Mannum-Adelaide Pipeline reached the metropolitan system in 1954. The water is drawn from the River at Mannum nearly 67 kilometres in a direct line from Adelaide, and is raised by three pumping stations a total of 457 metres to a 137 megalitre summit storage near Tungkillo. At first the water flowed into the Torrens and Onkaparinga Rivers and hence into the metropolitan system; later the pipeline was extended to a terminal storage near Modbury. The Mannum-Adelaide Pipeline is also connected to the Warren Reservoir on the South Para River and branches serve many country areas *en route*.

A second large pipeline to augment the metropolitan supply was completed in 1973. The pipeline extends for 48 kilometres from the River Murray near Murray Bridge to the River Onkaparinga near Hahndorf, and the water is distributed through the reservoirs on the latter stream. Three pumping stations lift the water 418 metres over the first 40 kilometres of the pipeline to a summit storage from which an 8-kilometre gravity section of the line discharges into the Onkaparinga. A branch main supplies the town of Murray Bridge and other branch mains supply areas in the Mount Lofty Ranges.

The Morgan-Whyalla Pipeline, completed in 1944, includes four pumping stations which lift the water 478 metres over a distance of 92 kilometres from Morgan to a summit storage at Hanson. From here the water gravitates 267 kilometres *via* Port Augusta to Whyalla. Branch lines have been laid to Woomera (177 kilometres) and other country centres. The Morgan-Whyalla Pipeline, being an additional source of supply for the Bundaleer system, has permitted reticulation over most of Yorke Peninsula. A second main was completed in 1966 and appurtenant works comprising additional storages and four new pumping stations were commissioned early in 1970. The second main which more than doubles the capacity of the scheme, parallels the original main to Baroota Reservoir, then extends westerly to Whyalla *via* a 12-kilometre undersea crossing of Spencer Gulf.

A 53-kilometre pipeline between Swan Reach and Stockwell which connects to the distribution section served by Warren Reservoir commenced operating in 1969 to supplement the supplies for lower northern areas from the Murray. A 143-kilometre pipeline between Tailem Bend and Keith completed in 1969 forms the backbone of a scheme involving 800 kilometres of branch mains subsequently laid to supply River

# PORTION OF SOUTH AUSTRALIA WATER SUPPLIES



Murray water to towns and farmlands in the Upper South East. The River Murray also supplies towns along its banks by means of direct pumping.

### Other Water Resources

#### *Eyre Peninsula*

Eyre Peninsula has no perennially flowing streams with the Tod River, the only stream that can be relied upon in normal years to provide some flow of water. Underground basins, mainly in the southern portion of Eyre Peninsula, provide most of the water supplies. Port Lincoln is supplied entirely with underground water available at shallow depth in the Lincoln Basin and Uley South Basin. The Uley-Wanilla Basin supplies Cleve and Cowell *via* the East Coast Main and also supplements the natural intake of the Tod Reservoir which was built in 1922 on a tributary of the Tod River.

A trunk main, 384 kilometres in length, from the Tod Reservoir to Ceduna and Thevenard was laid between 1923 and 1926 and a program of replacement and enlargement was completed in 1974. A 106-kilometre trunk main from Lock on the Tod Trunk Main supplies water to Kimba and intervening farmlands. This supply is augmented with water from the Poldo underground basin.

#### *South East*

The hydrology of the South East covers a complex of surface and underground waters with over 90 per cent of all water used derived from underground aquifers. The productivity of large areas of land has been greatly improved by the construction of a large drainage network as discussed on pages 322-3.

Eight Mile Creek to the east of Port MacDonnell carries a permanent natural overflow from the springs of the Ewen Ponds area and discharges about 65 000 megalitres a year into the Southern Ocean and there are other visible outlets. The Blue Lake now provides about 4 000 megalitres annually to Mount Gambier. There is scope for considerable development in the South East and it is likely that up to one million megalitres could be used annually from the underground water resources of the region.

#### *Other Underground Supplies*

Many other areas of the State are dependent on underground supplies, particularly for stock drinking water. The aquifers of the North Adelaide Plains provide the major source of water for market gardens and related irrigation, but the demand level of 26 700 megalitres has been found to be beyond the permanent capability of the area. Usage is subject to Government control, and investigations on means of prolonging the life of the aquifers are in progress. Further discussion on underground water appears on pages 25-7.

### Metropolitan Water Supply

In the following table, details of metropolitan services as well as revenue and expenditure are given for the metropolitan water supply district for the years 1979-80 to 1983-84.

**Adelaide Metropolitan Waterworks, South Australia**

Particulars (a)	1979-80	1980-81	1981-82	1982-83	1983-84
Length of mains (kilometres) .....	7 630	7 678	7 710	7 740	10 694
Number of services .....	317 597	321 843	327 096	330 659	336 191
\$'000					
Revenue:					
Rates and other services .....	47 339	53 293	61 194	70 778	79 527

## Adelaide Metropolitan Waterworks, South Australia (continued)

Particulars (a)	1979-80	1980-81	1981-82	1982-83	1983-84
\$'000					
Expenditure:					
Working expenses .....	26 300	31 457	34 672	43 551	40 927
Interest .....	17 594	19 637	23 601	25 535	27 530
Total .....	43 894	51 094	58 273	69 086	68 457
Surplus .....	3 445	2 199	2 921	1 692	11 070

(a) Includes particulars relating to near country areas supplied by extensions of the Metropolitan distribution system.

## Water Consumption

The following table gives details of water used during the year and storage capacity of major reservoirs at the end of the year for metropolitan and country districts for the years 1980-81 to 1983-84. The quantity of water pumped from the River Murray through the major pipelines is also shown.

## Water Storage and Consumption, South Australia

Particulars	1980-81	1981-82	1982-83	1983-84
Megalitres				
Capacity of major storages (at end of year):				
Adelaide metropolitan water supply (a) .....	208 840	207 440	202 040	202 040
Country water supply .....	34 290	33 980	33 980	33 378
Water consumption:				
Adelaide metropolitan water supply (b) .....	177 060	168 617	173 264	163 830
Country water supply (c) .....	89 336	90 217	88 257	79 370
Pumped from River Murray:				
Mannum-Adelaide Pipeline .....	56 656	22 392	80 240	35 274
Murray Bridge-Onkaparinga Pipeline .....	39 176	11 890	86 091	17 253
Morgan-Whyalla Pipeline .....	24 695	21 064	32 738	25 415
Other supply systems .....	13 693	13 471	21 859	12 924

(a) Includes storages on the Mannum-Adelaide and Murray Bridge-Onkaparinga Pipelines.

(b) Consumption within the Adelaide Statistical Division.

(c) Includes consumption in various areas outside of the Adelaide Statistical Division supplied from the Metropolitan distribution system.

## WATER RATES AND CHARGES

Water rates are levied on all properties served from or abutting a water main except where specific exemption from rating applies or the property is in an area not subject to rating.

Amounts payable by individual ratepayers are determined by a base water rate on the annual value of a property and a water rate per kilolitre. Payment of the base rate on property permits use of a water allowance which is determined by dividing the sum involved by the water rate per kilolitre. Water used in excess of the allowance is charged at the rate per kilolitre.

Valuation equalisation was introduced in Metropolitan and Country Water Districts from 1 July 1975. This system provides for a more even distribution of rates and

properties of equal market value pay approximately the same base water rates irrespective of location or year of valuation. A minimum charge of \$60 is applicable.

In Country Lands Water Districts (farm lands) the current base water rate is 60 cents for each hectare located within 1.6 kilometres of a main. A minimum charge of \$60 is applicable.

The current water rate per kilolitre applicable in City, Township and Country Lands Water Districts is 45 cents per kilolitre. Where water is supplied to properties outside of proclaimed water districts or otherwise beyond ratable limits it is supplied by measure at the ruling rate per kilolitre.

Approved churches, charitable institutions and schools are exempted from payment of water rates on annual values and water is supplied to them by measure at concessional prices. A remission of up to 60 per cent of water rates, with a maximum of \$75 a year, is provided to eligible pensioners.

Services from mains to property boundaries are installed and maintained by the Engineering and Water Supply Department. Connection fees are uniform throughout the State and are currently \$190 for a 20 millimetre service and \$265 for a 25 millimetre service with commensurately higher fees for larger services.

## SEWERAGE

### ADMINISTRATION

Sewerage of cities and towns in South Australia is undertaken by the State Government under the authority of the Sewerage Act, 1929-1984. The Act is administered by the Engineering and Water Supply Department for the Minister of Water Resources and provides for water borne sanitary sewerage schemes within proclaimed drainage areas. As a general rule the Government sewerage schemes are provided only in densely populated cities and towns where they are essential for public health or in areas where it is necessary to protect surface or underground water resources from pollution by domestic or industrial wastes.

Local Government authorities are empowered under the Local Government Act, 1934-1985 to provide sanitary drainage schemes and in recent years a number of these authorities have installed common septic tank effluent drainage schemes discharging to biological filters or oxidation ponds.

### METROPOLITAN SEWERAGE

Sewerage for Adelaide was first authorised by an Act of Parliament in 1878. Construction began in 1879 and by 1881 sewerage from the city and inner suburbs was admitted to a sewage farm at Islington. Since then continual expansion of sewerage systems has kept pace with development of the metropolitan area as far as physical and financial factors permit and Adelaide is now the most completely sewered of the Australian capital cities.

The proclaimed Adelaide Drainage Area at 30 June 1984 served an estimated population of 941 000 persons and covered 697 square kilometres of the Adelaide Plains between Darlington and Gawler, the area between Port Noarlunga and Aberfoyle Park and portion of the Blackwood and Belair area. Subdivision developers are required to make capital contributions towards the cost of sewer and water extensions for all new allotments in areas capable of being served within the Drainage Area.

Four major sewerage systems are employed, each draining to separate sewage treatment works at Bolivar, Glenelg, Port Adelaide and Christies Beach. Islington Sewage Farm was abandoned in 1966 when the Bolivar Treatment Works was put into service.

The Christies Beach Treatment Works began operating in August 1971, and will eventually serve the whole of the area between Coromandel Valley and Moana Beach. At present there are a number of small temporary treatment works installed in the Reynella-Morphett Vale area which will be phased out following connection of the developed areas to the Christies Beach Works.

A large number of common effluent drainage systems have been installed in fringe areas by local government authorities and most of these have been, or are planned to be, connected to the sewerage systems. A charge for each house connected is levied against local government authorities whose common effluent drainage systems discharge to sewer mains. Property owners pay an annual rate for the service to the local government authority concerned.

#### Metropolitan Sewers, South Australia

Particulars	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84
Adelaide drainage area (km <sup>2</sup> ) .....	682	683	697	697	697	697
Length of sewers (km) .....	4 978	5 045	5 169	5 222	5 298	5 318
Number of connections ...	327 582	332 246	339 520	341 364	346 525	352 236
				\$'000		
Revenue:						
Rates and other services .....	30 417	34 066	36 583	41 234	47 640	55 293
Expenditure:						
Working expenses ....	17 639	18 453	20 392	22 273	23 894	25 562
Interest .....	11 867	13 163	15 405	17 957	19 789	21 417
Total .....	29 506	31 616	35 797	40 230	43 683	46 979
Surplus .....	911	2 450	786	1 004	3 957	8 314

#### COUNTRY SEWERAGE

At 30 June 1984 the drainage areas of country sewerage schemes constructed and operated by the Engineering and Water Supply Department totalled 140 square kilometres; the length of sewers laid was 836 kilometres and the number of connections totalled 39 217. Sewerage schemes are located at Angaston, Balhannah, Gumeracha, Hahndorf, Lobethal, Mannum, Millicent, Mount Gambier, Murray Bridge, Myponga, Naracoorte, Oakbank, Port Augusta, Port Lincoln, Port Pirie, Stirling, Victor Harbor and Whyalla.

Construction of the Port Augusta, Stirling and Victor Harbor sewerage systems is still in progress. In 1983-84, five kilometres of sewers and 632 new connections were laid in country drainage areas. In addition, the Engineering and Water Supply Department has constructed schemes at Mount Burr and Nangwarry townships for the Woods and Forests Department and numerous schemes to serve country hospitals, institutions etc., operated by other authorities.

Common effluent drainage schemes have been installed by local government authorities in seventy-one localities. The total length of the drains is 850 kilometres and they serve some 35 030 properties.

The Australian National railways has provided schemes for settlements in the areas of Stirling North, Hesso and Pimba while the Department of Aboriginal Affairs has provided schemes at Point McLeay, Point Pearce, Nepabunna, Ernabella, Amata, Koonibba, Davenport and Gerard Aboriginal settlements.

Construction of systems is currently being carried out at Bute and Keith. It is anticipated that these projects will be completed during 1985.

#### SEWER RATES AND CHARGES

The Engineering and Water Supply Department provides sewer connections to property boundaries but internal drainage systems which are the responsibility of landholders must conform to regulations under the Sewerage Act and must be installed by authorised plumbers. Standard fees for sewer connections are \$105 and \$150 for 100-millimetre and 150-millimetre sizes respectively.

Sewer rates are levied on properties connected to or abutting a sewer, with a minimum annual charge of \$76. Valuation equalisation, as applicable to water rating, applies also to sewer rating. A marginally higher rate is charged in country areas. A remission of up to 60 per cent of sewer rates to a maximum of \$75 is provided to eligible pensioners.

Rates levied by local government authorities on properties connected to common effluent schemes are usually proportionate to the costs and interest charges involved in the schemes.

#### STATE WATER LABORATORIES

The Engineering and Water Supply Department has the responsibility to control pollution of the State's water resources, to maintain public water supplies at an acceptable quality and to operate sewerage systems. For this purpose, the Department maintains the State Water Laboratories at Bolivar, where a staff of chemists, biologists and other scientists and technical personnel examine over 55 000 samples of water, effluent and industrial wastes each year. A more detailed discussion on these laboratories was included on pages 369-71 of the *South Australian Year Book* 1975.

## 8.2 IRRIGATION AND DRAINAGE

#### IRRIGATION

The development of irrigation areas in South Australia has been carried out by both Government authorities and private interests. Since 1930 the administrative authority for Government irrigation areas had been the Department of Lands with the Engineering and Water Supply Department the constructing authority for the Minister of Irrigation, but from 30 June 1978, the authority has been transferred to the Minister of Water Resources with the Engineering and Water Supply Department being the responsible administrative department. A more detailed historical discussion of irrigation in South Australia was included on pages 314-6 of the *South Australian Year Book* 1970.

Irrigation areas are confined almost exclusively to the Murray Valley and can be classified into two groups; highland areas requiring the pumping of water, and reclaimed lands watered by gravitation. During 1983-84, 495 823 megalitres of water were diverted from the River Murray in South Australia for irrigation purposes.

#### Highland Areas

With the major exception of the Mypolonga Irrigation Area, highland irrigation is located in the hot and dry zone along the River Murray between Morgan and the Victorian border.

These areas are largely devoted to vineyards and citrus and stone fruit orchards which are irrigated by water pumped and distributed *via* open concrete-lined channels or low pressure piped mains. The Government is currently engaged in a major program of rehabilitating those areas still using channels, which are being replaced by sealed pipe



mains and metered connections to each property in the Government irrigation areas. There is a general change in irrigation practice from furrow irrigation to a variety of improved irrigation practices including overhead and undertree sprinklers, micro jet and drip irrigation. The incentives include reduced water use, increased application efficiency, reduced drainage and reduced labour. The increased control with the new systems allows irrigation schedules to be adjusted to more closely meet plant demand which results in increased productivity. The type of improved practice employed depends on the crop, terrain and soil type. Generally, furrow irrigation is being retained in areas with gentle flat slopes and well drained soils.

Landholders on Government controlled areas and on private lands constituted under special Parliamentary Acts, pay an annual rate for irrigation and a charge is made for additional water, either on a measurement basis where meters have been installed, or on an hourly basis where channels are still utilised. The Renmark Irrigation Trust also supplies water on a volume basis to landholders in its district.

Irrigation systems must also provide for the removal of surplus water which accumulates beneath the surface of the land. Holdings have internal drainage systems leading to comprehensive drainage systems which convey the water to evaporation basins.

### Reclaimed Areas

On the lower Murray between Mannum and Wellington, a series of swamp and overflow areas have been reclaimed by Government and private agencies.

Although these reclaimed areas contain some market gardens, they are devoted principally to the growing of green fodder for dairy herds and sheep flocks. These lands are watered by gravitation and surplus water is run into main drains from which it is pumped back into the river. Approximately 526 hectares of highlands adjacent to reclaimed areas have also been developed for the production of fodder crops through the use of spray irrigation and there are 327 hectares at Mypolonga used for horticulture.

### Areas Irrigated, South Australia

Areas Irrigated	1981-82	1982-83	1983-84
	Hectares		
Government controlled:			
Highland .....	13 000	13 000	13 000
Reclaimed swamp lands .....	4 000	4 000	4 000
Non-government:			
Highland .....	24 200	24 200	24 000
Reclaimed swamp lands .....	1 900	1 900	1 900

### THE RIVER MURRAY AGREEMENT

The *River Murray Waters Act 1915* ratified an agreement between the Commonwealth Government and the States of New South Wales, Victoria and South Australia. The River Murray Agreement provides that the minimum quantity of water to be allowed to be passed for supply to South Australia in each year shall be sufficient to maintain certain specified monthly flows in the lower river. The flow at Albury is shared equally by New South Wales and Victoria and each of these States has full control of its tributaries below Albury, subject in each case to the fulfilment of the South Australian allocation.

Works, to regulate the flow and control of the level of the River Murray, have included the construction of a number of storage areas and the erection of a series of locks and weirs. By 1928 Lake Victoria, in New South Wales adjacent to the South Australian

border, had been converted into a large storage area supplying water for the South Australian irrigation settlements. South Australia is responsible also for the control and operation of Lake Victoria storage and the section of the River Murray downstream of its inlet channel. This section of the river contains three locks. Between 1922 and 1930 six locks and weirs were erected between Blanchetown and the Victorian border. In addition, five barrages were placed at the Murray mouth to prevent the ingress of salt water from the sea and to maintain a higher level in the River for the use of the reclaimed areas. These barrages were completed in 1940.

The major storage area, the Hume Reservoir above Albury, was completed in 1936. Further works, the last being completed in 1961, have doubled the original capacity to more than 3 million megalitres. Except for that held in various lock pools, no water from the Murray is stored in South Australia. In 1962 agreement was reached for the construction of a reservoir of over 6 million megalitres covering 1 300 square kilometres with its dam at Chowilla, just inside the State border, but early in 1969 the River Murray Commission recommended that an alternative dam be built at Dartmouth in Victoria before further consideration be given to the completion of the Chowilla Dam. Legislation ratifying an agreement based on the Commission's recommendation was passed by the Commonwealth, New South Wales and Victorian Parliaments in 1970 and an Act ratifying the agreement was passed in the South Australian Parliament in August 1971. In June 1974 the River Murray Commission accepted a tender for the construction of the Dartmouth Dam and appurtenant works. Fourteen million cubic metres of earth and rockfill material comprised the main embankment. The river diversion tunnel was plugged on 3 November 1977 and filling commenced at that time. The Dam was subsequently completed on 9 November 1979. South Australia's annual entitlement was increased from 1 550 to 1 850 gigalitres in accordance with the River Murray Waters Agreement.

Legislation ratifying a new River Murray Waters Agreement was introduced into State Parliament during October 1982.

The new agreement is the first significant amendment affecting the River Murray in almost seventy years. It will enable the River Murray Commission to take account of water quality in its operations and investigations and to formulate water quality objectives for selected sections of the river.

### DRAINAGE

With the exception of the reclaimed areas along the lower Murray, already discussed in the previous section, and certain works associated with metropolitan development, drainage schemes in South Australia are confined to the south-east corner of the State. The topography of this area reveals a series of fertile valleys or flats interspersed by low infertile ranges running parallel to the sea and thus preventing the natural drainage of the land. In consequence, drainage schemes have been constructed to reclaim these areas.

The first major drainage scheme was commenced in 1863 and completed in 1885. This scheme, the Millicent Drainage System, reclaimed 40 000 hectares of land at a cost of \$300 000, this cost subsequently being included in the land allotment price. The system is maintained by the Millicent District Council from funds provided by the State Government.

Following this early success the Government undertook the construction of further drains during the next ninety years. These drains were constructed under three sets of conditions: *National Drains* were constructed at Government expense, the cost being absorbed in the price of the land when sold; *Petition Drains* were constructed on request from landholders who agreed to repay the full cost to the Government over a period of forty-two years; *Scheme Act Drains* commenced in 1908, provided for the Government

and the landholders to share the cost, the landholders share being repayable over forty-two years. After the Scheme Act Drains had been completed it was found that the cost exceeded the benefit derived, and subsequently, following a royal commission, the landholders' liability was reduced.

The passing of the South-Eastern Drainage Act Amendment Act, 1948 marked a new stage in the development of south-eastern drainage. Previously attention had been devoted to the construction of a system of drains removing large quantities of water from general areas and providing above all for the rapid removal of floodwaters. By 1948, 700 kilometres of drains had been constructed at a capital cost of \$1.4 million. However, in 1948, with the establishment of the Western Division Drainage Scheme, emphasis was placed on a complete drainage program as achieved by the earlier Millicent scheme. The Western Division Drainage Scheme, which aimed at the comprehensive drainage of 160 000 hectares of land between the Millicent and Kingston districts, has now been completed. In 1960 the Eastern Division Drainage Scheme, for the drainage of 300 000 hectares of flats lying between Kalangadoo and 65 kilometres north of Lucindale, was commenced and construction on this scheme was completed in November 1969, with some added minor work being undertaken in 1970 and 1972.

Under the schemes introduced since 1948 landholders were required to repay an amount based on a 'betterment assessment' of their property. As in the other schemes this amount was repayable over forty-two years. The 1971 amendment to the South-Eastern Drainage Act extinguished the liability of landholders to make a capital contribution in respect of existing drainage construction.

The Act was revised and substantially amended in June 1980. Drainage rates were abolished and drainage schemes in the area are now funded by the State Government. The Board's authority was also expanded to enable it to participate in water conservation and utilisation programs, including water diversions, restoration of wetlands, and the construction of weirs.

Approximately 1 450 kilometres of drains (excluding the Millicent scheme) have been constructed at a capital cost of \$20 000 000. These drains vary considerably in size from only a few metres to over 60 metres bottom width.

The Board now also maintains the Eight Mile Creek Drainage Scheme which is located 35 kilometres south of Mount Gambier near Port MacDonnell. Fifty kilometres of drains remove excess spring and rain water from 16 660 hectares of peat land on which 32 dairy properties are situated.

In addition to new construction, continual attention must be paid to the prevention of silting and of weed growth and to the upkeep of over 700 bridges and other structures along the system.

The system is administered by the South-Eastern Drainage Board under the South-Eastern Drainage Act, 1931-1985.

## 8.3 ROADS

Roads in South Australia are officially classified either as main roads, being those proclaimed as such under the provisions of the Highways Act, or district roads. Main and district roads within local government areas are vested in the various local government authorities who primarily are responsible for construction and maintenance works within their respective areas. However, there is provision in the Highways Act for the Commissioner of Highways to construct, reconstruct, and maintain important roads after due notice has been given, and in practice most of the roads carrying heavy traffic are constructed and maintained by the Highways Department. In areas outside the

control of local government authorities roads are vested in the Minister of Local Government under the control and management of the Commissioner of Highways.

The Highways Department is the road authority for South Australia. Its key objective is to ensure that the State has a road system consistent with community requirements. A continuous program of road improvement is carried out by reconstructing and widening arterial roads in the metropolitan area and the reconstruction, construction and sealing of important rural roads. Extensive road construction is carried out also in new housing development areas.

The construction program during 1983-84 has been heavily orientated towards the upgrading of the National Highways System. On the Stuart Highway 533 kilometres of the 925 kilometres between Port Augusta and the Northern Territory border have now been completed following the sealing of 176 kilometres during the year at an estimated cost of \$17.5 million. Construction and sealing of the Hawker to Leigh Creek road continued the upgrading of the rural arterial road network. Major urban projects completed included Salisbury Highway duplication between Ryans Road and Port Wakefield Road, duplication of Tapley's Hill Road from Burbridge Road to the River Sturt and the Mann Terrace/Park Terrace couplet section of the North East City of Adelaide Ring Route.

The National Association of Australian State Road Authorities (NAASRA) has defined a nine-level classification system which is used jointly by the Highways Department and the Bureau of Transport Economics for planning purposes. The Commonwealth Department of Transport has adopted a three-level system of road classification, based generally on the NAASRA system, for funding purposes.

The latter classification is used in the following table to show the length of roads, customarily used by the public, according to type of surface at 30 June 1984.

**Length of Roads: Type of Surface, South Australia  
At 30 June 1984**

Class of Road	Type of Surface		Total
	Sealed	Unsealed	
	Kilometres		
National roads (a) :			
National highways (b) .....	1 956	584	2 540
Arterial roads (c) :			
Rural .....	8 160	1 784	9 944
Urban .....	923	6	929
Local roads (d) :			
Rural .....	5 319	76 868	82 187
Urban .....	5 964	1 322	7 286
Total .....	22 322	80 564	102 886

(a) Roads declared by the Commonwealth Minister for Transport to be national highways or developmental roads under the provisions of the *Roads Grants Act 1981*.

(b) Selected roads linking Adelaide with other State capital cities including Darwin and Canberra.

(c) Roads declared by the Commonwealth Minister for Transport to be arterial roads under the provisions of the *Roads Grants Act 1981*.

(d) Roads not included in above categories.

In closely settled areas, particularly in the metropolitan area and country towns, most roads are surfaced with bituminous concrete or by bituminous penetration of a macadam base. In rural districts where traffic is light, roads may be formed of natural materials or

be only lightly gravelled but the more important country roads are constructed of gravel or crushed rock and are improved as traffic warrants, by the addition of a bituminous seal.

The Department maintains approximately 1 200 major bridges and culverts throughout the State. The River Murray in South Australia is bridged at five locations on two interstate routes and the Department provides free and continuous ferry services across the river at thirteen places. A free ferry service also operates across Cooper Creek, on the Birdsville Track in the far north of the State, when the creek is in flood.

### ROAD FINANCE

For South Australia, the main sources of funds for road works during 1983-84 were:

- (a) the net proceeds of fees imposed by the State Government for the registration of motor vehicles and the licensing of drivers;
- (b) the net collections from motor fuel licence fees levied pursuant to the Business Franchise (Petroleum Products) Act, 1979-1983;
- (c) Commonwealth Government grants to the States and Northern Territory pursuant to the *Roads Grants Act 1981* and the *Roads Grants Amendment Act 1982*;
- (d) Commonwealth Government grants to the States and Northern Territory pursuant to the *Australian Bicentennial Road Development Trust Fund Act 1982*; and
- (e) property rates and other levies imposed by municipal and district councils.

In 1983-84 funds received from the first four sources were expended by the Highways Department on works authorised by the Minister of Transport. The Highways Department also received funds from a number of other sources, and these included the receipts from the sale of surplus land, the rent from properties acquired for road purposes, the sale of surplus plant and machinery, the receipts from the operation of the trailer ship *Troubridge* and the rent for houses erected for occupation by employees.

Exact figures are not available for total expenditure in South Australia on the construction, reconstruction and maintenance of roads, streets, bridges, ferries, and associated works. Approximate expenditure by State and local government authorities during 1983-84 was \$204 million. This figure includes the cost of land purchased for new roads and for road widening and charges for depreciation of plant and machinery. The biggest single element of roads expenditure omitted from the above figure is the cost of work carried out under the provisions of the Planning and Development Act, which requires persons and authorities who subdivide land for housing to provide roads to certain specifications.

The following table shows Highways Department receipts and payments for the year 1983-84.

**Highways Department: South Australia, Receipts and Payments**

Particulars	1983-84
RECEIPTS (\$'000)	
Motor registrations and drivers' licences .....	40 523
Business Franchise (Petroleum Products) Act licence fees .....	25 726
Commonwealth Government grants (a) .....	93 780
Land sales .....	4 444
Rents from properties acquired for road purposes .....	3 189
Other (b) .....	9 453
Total .....	177 115

**Highways Department: South Australia, Receipts and Payments (continued)**

Particulars	1983-84
	PAYMENTS (\$'000)
Construction and reconstruction of roads and bridges .....	101 529
Maintenance of roads and bridges .....	46 434
Establishment, maintenance and operation of all Departmental land and buildings not acquired for roads .....	4 240
Plant purchase less depreciation .....	1 764
Other (b) .....	14 230
<b>Total .....</b>	<b>168 197</b>

(a) Includes receipts from Australian Bicentennial Road Development Trust Fund.

(b) Includes sales of plant and machinery, operation of the trailer ship *Troubridge*, rents from departmental properties and advance from Consolidated Account.

(c) Includes planning and research, variation in value of roadside materials and stores, undistributed general administration, operating expenses of the trailer ship *Troubridge* and repayment of loan funds.

**Commonwealth Government Road Grants**

These grants have been made to the States since 1923; the *Roads Grants Act 1981* and the *Roads Grants Amendment Act 1982* specify the arrangements for 1983-84 whereby financial assistance for roadworks is provided to the States and Territories by way of non-repayable Section 96 grants. The allocation to South Australia for 1983-84 was \$63.9 million or 8.2 percent of the total grant. A break-down of this allocation to national roads, arterial roads and local roads for South Australia is shown in the following table:

**Commonwealth Government Road Grants: South Australia, 1983-84**

	\$'000
National roads (a) .....	30 948
Arterial roads .....	18 919
Local roads .....	14 076
<b>Total grant .....</b>	<b>63 943</b>

(a) Incorporates approved construction and maintenance costs of declared national highways and approved construction costs of declared developmental roads.

An additional allocation to South Australia of \$29.8 million was made under the Australian Bicentennial Road Development (ABRD) Program in 1983-84. This program has the objective of upgrading Australia's road network to a high standard by 1988, the Australian Bicentenary year. The ABRD grant is funded by a surcharge on petrol and diesel excise. It is allocated to the various road categories in the following proportions: national roads 42 per cent; urban arterial roads 30 per cent; rural arterial roads 16 per cent and local roads 12 per cent.

**8.4 RAILWAYS**

Railway systems in South Australia are operated by both the Commonwealth and South Australian Governments. Management of the Australian National railways is vested in the Australian National Railways Commission (ANRC).

In August 1975 the State Government approved the transfer of non-urban railways to the Australian National Railways Commission, although the actual transfer did not

become operative until 1 March 1978. For further details of the operation of railways in South Australia during the transfer period and after the transfer date *see* page 468.

At 30 June 1984 ANRC operated 5 547 route kilometres of country rail track in South Australia. This included part of the 1 435 mm gauge Trans-Australia Railway from Kalgoorlie to Broken Hill; the 1 435 mm gauge Tarcoola to Alice Springs line; and other 1 600 mm and 1 067 mm gauge lines, including the isolated Eyre Peninsula system (1 067 mm gauge).

At 30 June 1984 the State Transport Authority (STA) operated 152 route kilometres of metropolitan (1 600 mm gauge) rail track in South Australia.

Only a small portion of the Adelaide metropolitan area is served by railways, the main trunk routes passing through northern and southern suburbs. The line to Noarlunga Centre serves south-western suburbs and carries passenger traffic and goods traffic to Port Stanvac and Lonsdale. This line serves the rapidly expanding industrial and housing development along the coast south of Adelaide.

The Gawler line serves industrial and residential areas on the plains to the north of Adelaide.

The Port Adelaide line, its extensions to Outer Harbor, the branch line to Grange, and spur lines to industrial establishments provide better coverage in north-western suburbs than is achieved elsewhere in Adelaide.

The service to the residential areas of Blackwood and Stirling is by the Adelaide to Bridgewater section of the Adelaide to Melbourne line.

A more detailed historical survey on railways in South Australia was included on pages 263-6 of the *South Australian Year Book* 1966.

The only private railways operating in South Australia are the lines owned by the Broken Hill Proprietary Co. Ltd from Iron Knob and Iron Baron to Whyalla (82 kilometres) used for the carriage of iron ore; and from Coffin Bay to Port Lincoln (40 kilometres) used for the carriage of limesand.

### **Standardisation of Rail Gauges**

Narrow, standard, and broad gauge systems exist in South Australia. For many years railway administrators have been greatly concerned about the increased costs and decreased efficiency associated with the transshipment of goods and passengers and with the provision, maintenance and operation of different sets of rollingstock. During recent years there has been increasing pressure for standardisation of rail gauges in the interests of efficiency and economy of operation of transport services as a whole.

Details of lines that were standardised before the transfer of the non-urban railways are shown on pages 347-8 of the *South Australian Year Book* 1978.

With the completion of the Crystal Brook to Adelaide standardisation project, Adelaide was linked with the standard gauge connection with Alice Springs, Sydney and Perth in December 1982. Greatly improved transit times will enhance the potential of South Australian based manufacturing firms.

### **Tarcoola-Alice Springs Railway**

The 831 kilometres standard gauge Tarcoola-Alice Springs line, which became fully operational in December 1980, provides a passenger service linking Adelaide and Alice Springs within twenty-four hours instead of nearly three days on the old line through Marree; a reduction of time for freight train schedules has also been achieved.

Construction of the line was completed a year ahead of schedule, and within the budget of \$145 million.

## 8.5 HARBOURS AND AERODROMES

### HARBOURS

The State of South Australia, including Kangaroo Island, has a coastline of more than 3 850 kilometres. There are two large indentations, Gulf St Vincent and Spencer Gulf, which have many harbours for shipping.

The structure of the South Australian commercial ports system includes:

- (a) State commercial deep sea ports,

Port Adelaide	Port Pirie
Port Bonython	Rapid Bay
Port Giles	Thevenard
Port Lincoln	Wallaroo

- (b) Other commercial ports,

Klein Point	Kingscote
-------------	-----------

- (c) Privately operated commercial deep sea ports,

Ardrossan	} (Broken Hill Proprietary Co. Ltd)
Proper Bay	
Whyalla	

Ballast Head, Kangaroo Island (CSR Building Materials)

Port Stanvac (Petroleum Refineries (Aust.) Pty Ltd)

The Department of Marine and Harbors also maintains jetties and wharves for promenades and fishing purposes at many other minor ports no longer used by commercial vessels.

### CONTROL OF HARBOURS

The control of all harbours (including the River Murray) is vested in the Minister of Marine; he is responsible for the control of navigation within harbours and for all harbour facilities including lights, buoys, beacons, bulk loading plants and fishing boat accommodation and in addition for the control of the competency of masters and others in charge of intrastate vessels and fishing vessels, and the seaworthiness and safety of such vessels. Relevant legislation administered by the Department of Marine and Harbors includes the Harbors Act, 1936-1981, the Marine Act, 1936-1976, the Prevention of Pollution of Waters by Oil Act, 1961-1982 and the Boating Act, 1974-1980.

#### Department of Marine and Harbors, Indebtedness, Revenue and Expenditure

Year	Loan Fund Indebted- ness	Revenue	Expenditure from Revenue			Surplus (+) or Deficit (-)
			Working Expenses	Interest	Total	
			\$'000			
1980-81 .....	102 345	22 618	17 595	8 387	25 982	-3 364
1981-82 .....	108 261	25 095	19 122	9 622	28 744	-3 649
1982-83 .....	111 286	24 165	23 669	10 785	34 454	-10 289
1983-84 .....	117 092	31 323	24 214	11 560	35 774	-4 451



In 1983-84 the State-owned ports handled 8 994 523 tonnes of cargo or approximately 58.5 per cent of the total tonnage of 15 368 840 tonnes passing through all the ports in South Australia.

### HISTORICAL

For a detailed description of development in the nineteenth century *see* pages 270-1 of the *South Australian Year Book* 1966.

### Trend of Development

As shipping has increased through growth in trade many wharves and jetties have been strengthened or replaced by better structures. To keep most harbours open for larger vessels it has been necessary to deepen and widen navigation channels, deepen existing berths and extend jetties into deeper water. Since the establishment of new soldier settlements in the 1950s, shipping to and from Kangaroo Island has increased. Additional harbour facilities were made available with the provision of a trailership berth at Kingscote for the roll-on roll-off vessel *MV Troubridge* which went into service in November 1961. Trailership berths were also built at Port Adelaide and Port Lincoln.

A change in the pattern of intrastate shipping has occurred progressively since 1952 with the provision of bulk handling facilities for grain at major ports. These facilities are now available at Port Adelaide, Port Pirie, Wallaroo, Port Lincoln, Thevenard and Port Giles, and also at Ardrossan under agreement with the owner of the private wharf. Grain is railed or trucked overland to terminal silos and loaded aboard ocean-going vessels by means of conveyors, so eliminating ketch trade from the smaller ports. Competition from intrastate road and rail transport has affected the larger ports as well, so that very little general cargo is carried between ports in this State.

Future developments at ports other than Adelaide are likely to be concerned primarily with bulk trades and the increasing size of bulk carriers. For example, bulk handling facilities, involving extension of an existing jetty to provide two outer berths for loading grain ships and an inner berth for unloading phosphate-rock carriers, have been completed at Port Lincoln. The phosphate-rock berth caters for ships up to 35 000 tonnes. The first conveyor loader system was commissioned in May 1977 and the first ship loaded grain on 26 May 1977. A second ship loader, commissioned in February 1978, doubled the input capacity to 4 000 tonnes an hour. The two grain berths cater for ships up to 60 000 tonnes but could be modified for ships of 100 000 tonnes. The overall cost of the whole project (including dredging) was almost \$13 million.

A new port costing \$48 million at Port Bonython in Spencer Gulf to service the Cooper Basin Oil and Gas Project of Santos Ltd, came into initial use in 1983. Ownership and marine affairs responsibility reverted to the Minister of Marine in line with indenture provisions in November 1983.

### Development of Port Adelaide

The Greater Port Adelaide Plan, details of which were released in 1949, included proposals for twenty projects for port development over the ensuing fifty years. Among those projects were:

- (a) the improvement and extension of wharves and allied cargo facilities;
- (b) the deepening and widening of the shipping channels and provision of larger swinging basins;
- (c) the reclamation and development of low-lying land adjacent to the port for the creation of industrial, commercial and dock estates.

Some of these projects have been completed while others are still in progress, *e.g.* the Port River has been deepened to 9.1 metres at Low Water and five swinging basins

provided. The river channel has been widened to a minimum width of 152 metres. The material dredged in this operation is being used to reclaim part of the 800 hectares of low-lying land intended to be used for industrial and commercial sites and for port extensions.

To ensure the future of Port Adelaide as a major port, a cellular roll-on roll-off container berth, capable of accommodating the largest cellular container ships likely to serve Australia in the foreseeable future, has been established at Outer Harbor. The berth, channel and swinging basin are suitable for ships of 290 metres in length, 13 metres in working draft and a capacity of almost 3 000 containers. The approach channel has been deepened to a depth of 12.0 metres so that ships are not delayed by tide movements. The berth was officially opened on 17 March 1977 and 49 vessels used the facilities during 1981-82. A second container crane approved for the berth in December 1983 is expected to be in operation in 1986.

Five container depots have been built by private enterprise in the dock industrial estate and offer acceptance, forwarding, packing and unpacking facilities for international and interstate containers and other unit loads: to facilitate shipment of wool in containers a large wool store and a high density wool dumping centre have been established adjacent to these depots. The port is also a recognised container design, manufacture, repair and maintenance centre.

An interstate roll-on roll-off terminal in No. 3 Dock, known as No. 25 berth, was opened early in 1971 and later extended to serve larger roll-on roll-off vessels engaged in overseas trade. A berth in No. 1 Dock provides a reinforced concrete pad for the stern-loading type of vessel operating between Port Adelaide and ports in Tasmania. Other developments include No. 29 berth to accommodate roll-on roll-off vessels and modifications to an Outer Harbor berth to serve larger overseas roll-on roll-off vessels.

Large offshore oil and gas production structures have been built in the Port of Adelaide in recent years and submarine construction contracts are being sought from the Australian Government.

The standard gauge rail extension to the port was completed in December 1982 and Port Adelaide now stands at the centre of the Australian National Railways System.

### AERODROMES

There were thirty-four civil aerodromes in South Australia at 30 June 1984 including seven owned and operated by the Commonwealth Government and twenty-seven licensed aerodromes owned and operated by local authorities or private interests. In addition there are numerous authorised landing and alighting areas which are fields prepared for the operation of aircraft but not open to public use. The Commonwealth Government specifications covering these fields are less exacting than those used in the development of government owned or licensed aerodromes. Licensed and Government aerodromes in South Australia are listed below.

#### *Licensed*

Amata	Kimba	Naracoorte
Cleve	Kingscote	Olympic Dam
Cooper Pedy	Leigh Creek South	Port Augusta
Cowell	Loxton	Port Pirie
Ernabella	Marree	Renmark
Fregon	Millicent	Streaky Bay
Granite Downs	Minnipa	Tieyon
Indulkana	Moomba	Waikerie
Innamincka	Mount Dare	Wudinna

*Government Owned*

Adelaide  
Ceduna  
Mount Gambier

Oodnadatta  
Parafield

Port Lincoln  
Whyalla

The main terminal in South Australia is the Adelaide Airport located six kilometres west of the city, which is an international airport with scheduled services to Europe, the Far East and New Zealand. It is on the scheduled flights of interstate services from Sydney, Melbourne, Perth, Canberra and Darwin and is the terminus of intrastate services.

Since the opening of the Adelaide Airport the aerodrome at Parafield, about eighteen kilometres north of Adelaide, has been restricted principally to use by light aircraft.

Other aerodromes are situated near the larger towns *e.g.* Mount Gambier, Whyalla, Port Lincoln and Port Pirie. About half of the licensed aerodromes are on stations, missions, etc. in the northern part of the State.

In addition to the civil aerodromes there are two major aerodromes, one at Woomera controlled by the Department of Defence, through the Defence Research Centre, and the other at Salisbury (Edinburgh Airfield) which are used by aircraft associated with trials operations and by civil charter aircraft carrying passengers and freight. Edinburgh Airfield is also the base for two Royal Australian Air Force maritime squadrons.

### Control of Aerodromes

At a conference of Commonwealth Ministers and State Premiers in May 1920, it was agreed that the Commonwealth should introduce a Bill to give effect to the Convention for the Regulation of Air Navigation signed in Paris on 13 October 1919. The *Air Navigation Act 1920*, under which a Controller of Civil Aviation was appointed as head of the Civil Aviation Branch which came under the jurisdiction of the Department of Defence, had three main objectives:

- (a) generally to regulate civil aviation activities in Australia;
- (b) to carry out the provisions of the Convention on Air Navigation signed in Paris;
- (c) to apply the principles of the Convention to domestic as well as international flying operations.

Regulations were drawn up under this Act to provide, *inter alia*, for the registration and periodic inspection of aircraft, licensing of aerodromes, examination and licensing of personnel engaged in flying and in upkeep of machines, control of aircraft movements, and the application of rules of the air.

The South Australian Parliament passed the Commonwealth Powers (Air Navigation) Act, 1921 in which it referred to the Commonwealth powers to make regulations in connection with international and interstate air navigation. The Air Navigation Act, 1937 provided for the application of the Commonwealth Air Navigation Regulations to and in relation to air navigation within the State of South Australia and repealed the earlier Act.

## 8.6 ENERGY

A segment on energy in the State was included on pages 374-88 of the *South Australian Year Book 1983*. It provided a comprehensive examination of South Australia's energy resources, production, conversion and consumption. This section focuses mainly on those areas where additional information has become available.

## AUSTRALIAN SITUATION

Australia is an energy-rich country with the greater part of its total primary fuel resources represented by coal, as illustrated in Figure 1.

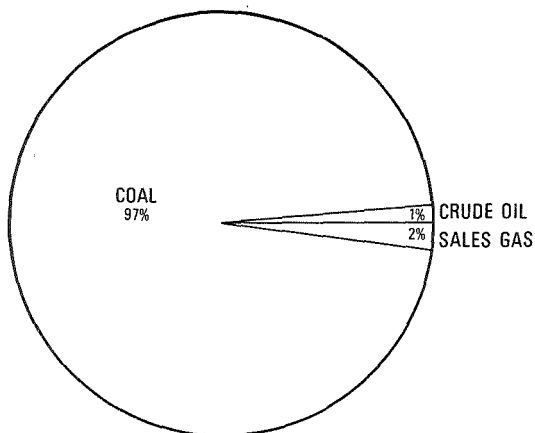


Figure 1. Primary Fuel Resources, Australia, 1981.  
Source: Australian Department of Resources and Energy.

While oil accounts for only one per cent of total resources, nearly half of current annual energy consumption is based on oil as illustrated in Figure 2.

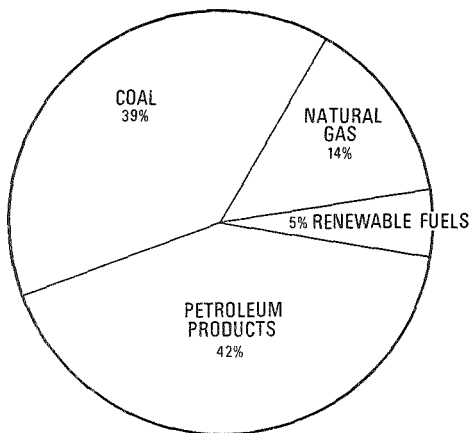


Figure 2. Demand for Primary Energy, Australia, 1982-83.  
Source: Australian Department of Resources and Energy.

## SOUTH AUSTRALIAN SITUATION

**Energy Consumption Patterns**

The usage of primary fuel in South Australia for the year ending 30 June 1983 is illustrated in Figure 3.

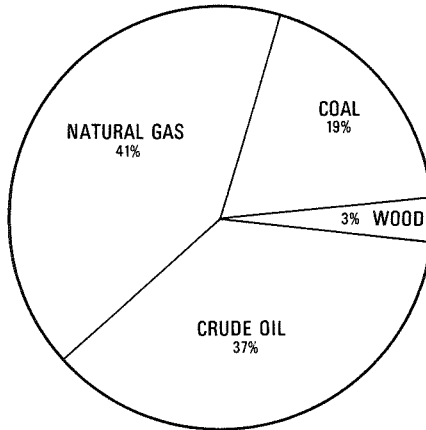


Figure 3. Primary Fuel Usage, South Australia, 1982-83.  
Source: South Australian Department of Mines and Energy.

South Australia shares with Australia and the rest of the world the problem of future provision of adequate fuel for transport equipment and mobile plant. A problem more

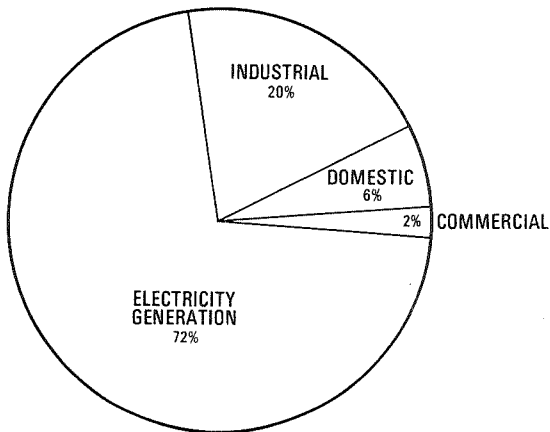


Figure 4. Natural Gas Usage, South Australia, 1982-83.  
Source: South Australian Department of Mines and Energy.

specific to South Australia, however, is the future supply of fuel for the major energy utilities; the South Australian Gas Company and the Electricity Trust of South Australia. In May 1983 the Advisory Committee on Future Electricity Generation Options was established and reported on this and other matters to the State Government in June 1984. Recommendations were made relating to future natural gas supply, electricity interconnection and use of coal for electricity generation.

The energy use pattern illustrated is quite different from that of the nation as a whole. This difference is largely attributable to the significant quantities of natural gas used by the Electricity Trust of South Australia for electricity generation. Natural gas usage in this State is shown in Figure 4.

#### **South Australia's Energy Resources**

Although South Australia has a reasonably varied energy resource base, the State depends almost entirely on non-renewable fossil fuels for its energy needs. Details of these resources, namely coal, natural gas, liquid petroleum gas (LPG), crude oil and condensate and some others, are given below.

##### *Coal*

South Australia, by comparison with the eastern mainland States, is not well endowed with deposits of readily exploitable coal. However, near surface deposits of coal occur widely throughout the State in basins of Permian, Triassic, Jurassic and Tertiary age. Demonstrated and inferred reserves exceed 18 500 million tonnes. These low rank non-coking coals are of comparatively poor quality because of their generally high moisture, sodium, chlorine, sulphur and ash content.

Extensive seams of Permian bituminous coal have been delineated during the course of exploration for hydrocarbons in the Cooper and Pedirka Basins, but they are too deep (1 000-3 000 metres) and too remote to be mined economically. *In situ* gasification may ultimately provide a means of tapping this vast resource.

At Leigh Creek, the only operational coal mine in South Australia, quantities of about 1.5 million tonnes of sub-bituminous coal are currently being removed annually for steam raising at the Thomas Playford (Port Augusta) Power Station to supply about one fifth of the State's electricity requirements.

It is anticipated that by the year 2000, coal-fired electricity generation will satisfy 60 per cent of the State's total electricity requirements compared with 18 per cent at present. Proven reserves of the Telford Basin (Leigh Creek) are sufficient to supply the existing 330 megawatt Thomas Playford Power Station at Port Augusta and the nearby new Northern Power Station which comprises two 250 megawatt units expected to be commissioned in the period 1984-85.

South Australian coals generally have a low calorific value and are difficult to burn efficiently in conventional pulverised-coal burners. Appropriately designed, operated and maintained boilers which will satisfactorily operate on these coals are therefore required. High-grade bituminous coal is currently being imported from the eastern States for the production of coke in the iron and steel industry at Whyalla. Quantities of coal and coke are also imported for use in the silver-lead-zinc smelters at Port Pirie.

##### *Natural Gas*

As it is the second largest energy supply source after oil, natural gas (largely methane) has played a vital part over the last decade in South Australia's energy consumption pattern. In 1982-83, natural gas supplied 41 per cent of the State's primary energy and was utilised as follows; electricity generation 72 per cent, industrial 20 per cent, domestic 6 per cent, commercial 2 per cent (*see* figure 4).

This State was one of the earliest users of natural gas in Australia with first supplies arriving in Adelaide from the Cooper Basin in November 1969. More than two thirds of this gas is presently consumed in electric power generation at the Electricity Trust of South Australia power stations at Torrens Island and Dry Creek. The Trust's use of natural gas provided the economic justification for the construction of the 790 kilometre pipeline needed to deliver the gas to Adelaide. The remainder is reticulated to homes, industry and commercial premises for use directly in heating and drying applications.

However, gas reserves are at present fully committed to New South Wales and South Australian users and on the basis of existing agreements and present reserves of economically producible gas, supplies are available for South Australia only until 1987.

The Cooper Basin Producers have recently claimed sufficient reserves to fulfil their obligations for New South Wales and are negotiating the terms for future supply to South Australia with the South Australian Government, which is also examining the potential of interstate supply sources and the production of a synthetic replacement for natural gas as possible long term alternatives to Cooper Basin natural gas.

### *Liquid Petroleum Gas (LPG)*

Recoverable LPG reserves in the Cooper Basin are about 6.5 million tonnes. LPG (propane and butane) could be an important substitute for petrol in South Australia. The Government is actively promoting its use as a motor fuel to reduce the State's dependence on imported petroleum products for transport fuel and make greater use of indigenous resources.

The Cooper Basin Producers have constructed an LPG storage and loading terminal at Port Bonython, near Whyalla, which now supplies South Australia's LPG needs via a liquids pipeline from the Cooper Basin. In addition, LPG is exported to other States and overseas. The Port Stanvac refinery will continue to supply a small amount of LPG for local distribution.

The potential use of LPG as a transport fuel will depend on the maintenance of the price differential between LPG and motor spirit. This State now has more LPG outlets per head of population than any other State.

### *Crude Oil and Condensate*

Oil is an extremely convenient energy source because of its ease of handling and storage, high energy value per unit volume and broad range of uses. It is one of the most widely used fuels in this State and currently satisfies about 40 per cent of energy demand. While Australia is better off than many other countries in the world in terms of having a local source of oil, in 1981-82 this State imported about 90 per cent of its feedstock requirements from overseas and the remainder from Barrow Island and the Gippsland oilfields to meet the needs of the refinery and the lubricating oil plant at Port Stanvac.

Oil discoveries in the Cooper and Eromanga Basins indicate that South Australia has a share in the largest onshore petroleum region in Australia. Information provided by the South Australian Department of Mines and Energy indicates that discovered fields in the South Australian segment of this region contain 87 million barrels of recoverable crude oil and condensate (liquids recoverable from gas wells).

While petroleum products are important to this State's economy in general, most are used in transportation. Details of the share of petroleum products used by each sector of the economy are shown in Figure 5.

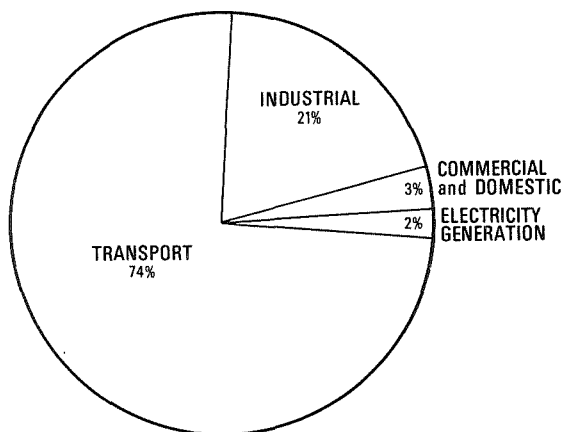


Figure 5. Share of Petroleum Use by Sector in South Australia, 1982-83.

Source: South Australian Department of Mines and Energy.

In addition to providing most of the energy (99 per cent) used in transport in this State during 1982-83, petroleum products supplied 28 per cent of all energy used in industry, and 9 per cent of the energy used in the commercial and domestic sector, as well as minor contributions to the generation of electricity. In addition, petroleum products (LPG) contributed toward the production of synthetic natural gas, which is reticulated as town gas in Whyalla and Mount Gambier.

Note: The statistics of petroleum usage by industry etc., outlined above, are not comparable with those published in the 1983 edition of the South Australian Year Book because of changes to the industry classification system used by the South Australian Department of Mines and Energy.

### Wood

Approximately 4 per cent of this State's annual energy demand is met by wood. Its main use is in the domestic sector as a heating fuel, although some (largely wood waste) is used in industry, particularly in the forestry industry and for generating some electricity in the South East of the State. Currently, most wood supplies come from the State's forestry areas in the South East and from the Riverland mallee scrub. The South Australian Department of Mines and Energy has completed a study which estimated that in 1982-83 approximately 360 000 tonnes of wood was used for fuel in the domestic sector. This represents approximately 23 per cent of total domestic energy usage as illustrated in Figure 6.



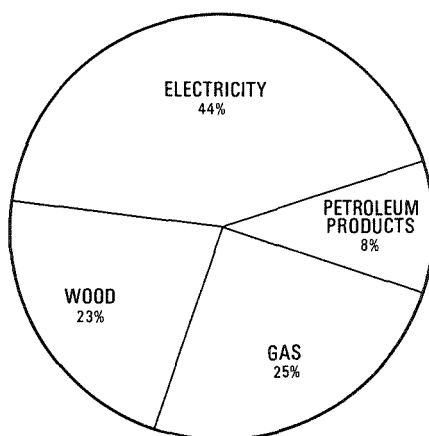


Figure 6. Energy Use in the Domestic Sector, 1982-83.

Source: South Australian Department of Mines and Energy.

### *Solar*

South Australia, because of its latitude and dry climate has a significant potential for utilising direct or radiant solar energy. Solar hot water systems for industrial and domestic applications and for swimming pools are already in use and offer the potential for some energy savings. Solar energy also offers immediate benefits if taken into account in building design. However, it can be low in intensity and variable in distribution. Its full potential will only be realised with advances in technology and improvements in relative cost; there is already increasing scope for the use of photo-voltaic cells to generate electricity in remote areas for specialised purposes such as telecommunications.

### **South Australian Energy Flows**

The flow of energy in South Australia from primary energy sources (such as coal or natural gas) through secondary forms of energy (such as petrol and electricity) to the final end use of the fuel is shown in Figure 7. The relative contribution of each primary and secondary form of energy is shown for both the State as a whole and for the various end uses of fuel: this contribution is denoted by the relative thickness of the bars. In addition to identifying the different sources of energy, this diagram is helpful in showing how basic energy resources can be converted to other more useful forms and the amount of energy that is dissipated on each conversion.

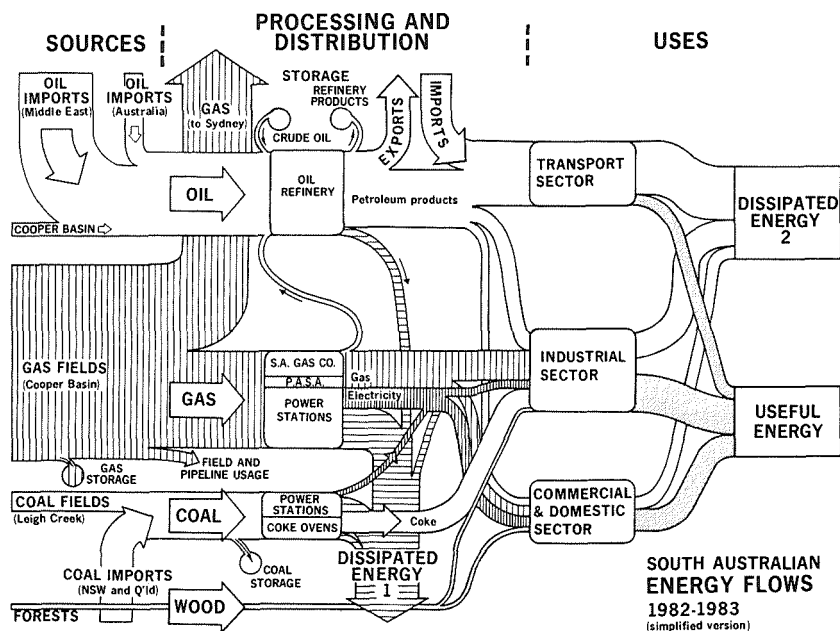


Figure 7. Energy Flows, South Australia.

Source: South Australian Department of Mines and Energy.

The ability to change an energy resource from one form to another can add to the flexibility of the energy supply system, by enabling an energy resource to be converted to a more convenient form of energy. For example, coal can be burned directly to provide heat or used as a boiler fuel to generate electricity. Natural gas can be burned directly to generate heat, used as a boiler or turbine fuel to generate electricity, or used directly in compressed or liquefied form as a transport fuel. Crude oil can be refined to produce a number of specific liquid products, which can be used for heating, electricity generation, petrochemical production and transportation. The relationships between primary energy sources, their secondary and tertiary energy products and their end uses can be represented by the process illustrated in Figure 8.

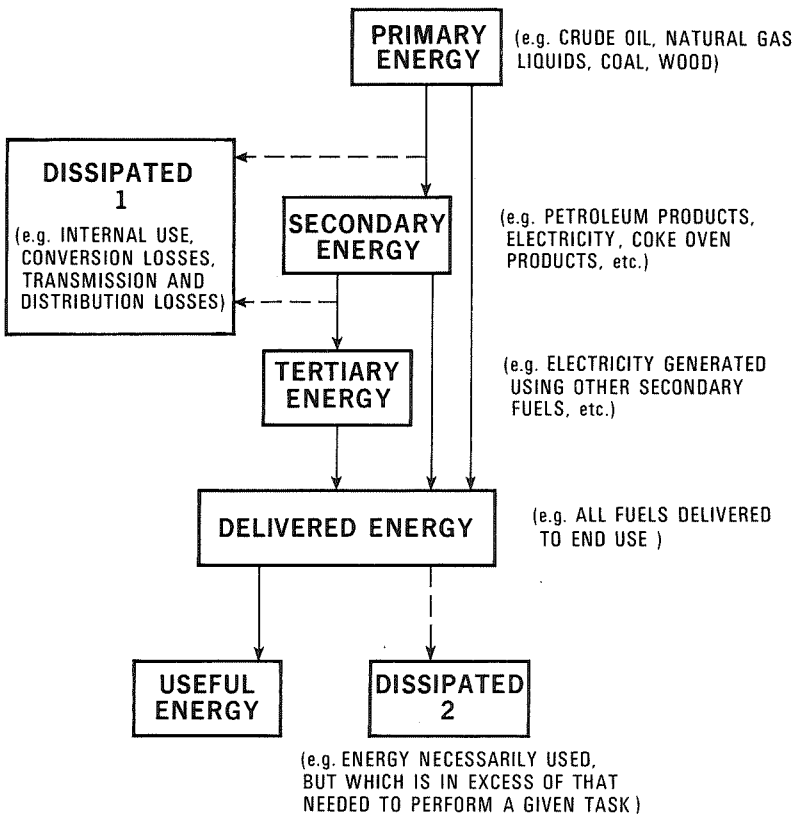


Figure 8. Energy Flow Chart.

Source: South Australian Department of Mines and Energy.

The relationship between primary energy sources, delivered energy and useful energy is illustrated in Figure 9.

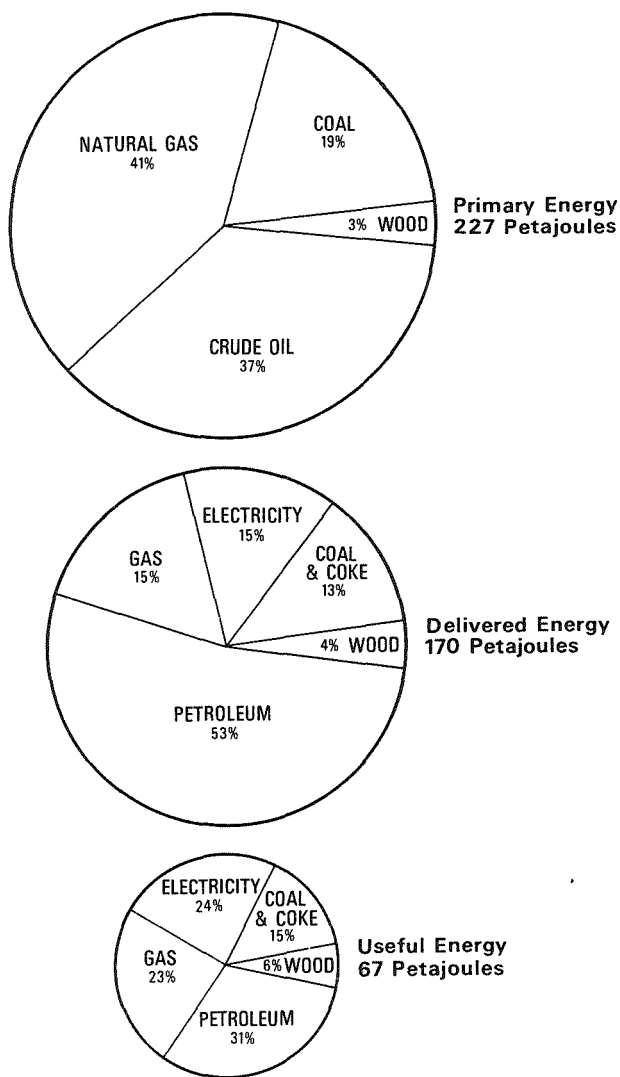


Figure 9. Relationships between Primary, Delivered and Useful Energy, South Australia, 1982-83.

Source: South Australian Department of Mines and Energy.

Note: Petajoules are an energy measure representing  $10^{15}$  joules.

## Conservation

Energy conservation programs are directed towards determining the means of reducing waste and improving efficiency in the production and end use of energy resources, *i.e.* managing better with the limited energy resources available rather than doing without the valuable and necessary functions that energy can provide.

In industrialised countries such as Australia, there is scope for improving the efficiency with which energy is used without adversely affecting levels of economic activity or current lifestyles.

Australian conservation policies have been developed as part of the National Energy Conservation Program which is supported by the Commonwealth and State Governments. The program encourages conservation through media advertising, publications and awards and provides funds for a variety of energy awareness activities.

## National Energy Survey

In June 1983 a survey was conducted throughout Australia by the Australian Bureau of Statistics (ABS) to obtain information about the number and type of selected domestic appliances held by households. The survey was carried out as a supplement to the monthly Population Survey and is the second National Energy Survey of Households to be undertaken by the ABS, the first being in November 1980.

The main results of the survey of the estimated 463 500 households in South Australia during June 1983 were as follows; 94 per cent have at least one form of heating appliance, comprising electric 43 per cent (including portable heaters), gas 25 per cent, wood/solid fuel 16 per cent and oil 10 per cent. Fifty-one per cent of households have refrigerative air conditioning and 12 per cent an evaporative unit. Overall, there has been an increase of 12 per cent in the number of households with an air-conditioner.

In addition, 52 per cent of households have a freezer, 12 per cent a dishwasher, 55 per cent an electric oven and 43 per cent a gas oven; 52 per cent use electricity as the main fuel for water heating, 38 per cent use gas and 2 per cent utilise solar energy. Fifty-four per cent of households have ceiling insulation and 9 per cent wall insulation. Ownership of microwave ovens has increased to 8 per cent of households compared with 3 per cent in November 1980 and 39 per cent of households now have rotary clothes dryers compared with 30 per cent previously.

The next survey will be conducted over the period 1985-86.

## SOUTH AUSTRALIAN ENERGY AUTHORITIES AND ORGANISATIONS

In South Australia, there are several authorities and organisations concerned with the mining, processing, distribution and monitoring of the State's energy resources *e.g.* the Pipelines Authority of South Australia and the South Australian Energy Council. Information about these bodies is contained in pages 384-6 of the *South Australian Year Book* 1983.

## ELECTRICITY

In 1946 the Electricity Trust of South Australia (ETSA), a public corporation, acquired the assets of the Adelaide Electric Supply Company and since then the Trust has been responsible for electricity generation and distribution throughout most of the State. The Trust is an autonomous body, with a board of seven members appointed by the Government, and it reports to Parliament through the Minister of Mines and Energy. It is responsible for its own finances (including loan raising) and pays all normal State taxes such as payroll tax, land tax and local government rates. Over the years indigenous

fuels—coal from Leigh Creek and natural gas from the north-east of the State—have largely supplanted imported fuels. A detailed description of the development of electricity supply was included on pages 278-81 of the *South Australian Year Book* 1966.

### Power Generation

The Osborne 'A' station produced all of the requirements of the South Australian electricity network from 1923 until 1947 when the 'B' station commenced operations and the 'A' station was subsequently closed in 1968. At 30 June 1984 the remaining generating capacity at Osborne (excluding emergency generating plants) was 240 megawatts.

A major decision by the Trust was the construction of the Thomas Playford Power Station at Port Augusta, designed to burn Leigh Creek coal exclusively. The 'A' section was completed in 1954 while the 'B' section was completed in 1964 to give a combined total generating capacity of 330 megawatts.

Following the passing of the Electricity Trust of South Australia (Torrens Island Power Station) Act in 1962 work commenced on the construction of section 'A' of the Torrens Island Power Station. Section 'A' was completed in the first half of 1971 and comprises four 120 megawatt turbo-generators with associated boiler equipment. Stage 1 of Section 'B' comprising two 200 megawatt turbo-generators was completed in October 1976. Stage 2 of Section 'B' also has two 200 megawatt turbo-generators. The first has been operational since 1979, and the second since early 1981. The combined capacity of 'A' and 'B' sections of Torrens Island Power Station is 1 280 megawatts.

Gas turbine plants have been installed at Dry Creek (near Adelaide), at Snuggery (in the South-East) and at Mintaro (near Clare in the Mid-North). The Dry Creek and the Mintaro installations are fuelled by natural gas while the Snuggery installation uses distillate. The Mintaro unit was commissioned for commercial use in January 1984. All three installations can be operated by remote control from the System Control Centre in Adelaide. With the commissioning of Mintaro, total installed capacity of the gas turbine plant is 321 megawatts.

**Electricity Generation, South Australia <sup>(a)</sup>**  
**Installed Capacity of Generating Plant in Power Stations at 30 June**

Power Stations	1979	1980	1981	1982	1983	1984
	Megawatts					
Torrens Island .....	880	1 080	1 280	1 280	1 280	1 280
Port Augusta .....	330	330	330	330	330	330
Osborne .....	240	240	240	240	240	240
Dry Creek .....	156	156	156	156	156	156
Mintaro .....	..	..	..	..	..	90
Snuggery .....	75	75	75	75	75	75
Port Lincoln .....	9	9	9	9	9	9
Total .....	1 690	1 890	2 090	2 090	2 090	2 180

(a) Source: Electricity Trust of South Australia.

To meet future demands, a power station comprising two 250 megawatt turbo-generators and boiler units is being constructed on a site immediately south of the existing station at Port Augusta. The boilers, specially designed to burn Leigh Creek coal, will be fitted with electrostatic precipitators to reduce dust emission. These units are expected to be available for commercial operation in 1985.

### Fuels

The Trust relies heavily on natural gas as its main fuel with 83.5 per cent of its total

generation in 1983-84 coming from this source. Gas has been used at the Torrens Island Power Station since 1969, at the Dry Creek Power Station since 1973, and at Mintaro since 1984.

As there is no assurance of sufficient quantities of natural gas being available for electricity generation after 1987, the Trust may need to have alternative fuel sources for the Torrens Island Power Station. Fuel oil could be used in much larger quantities than at present or the station converted to burn imported black coal. The trust is proceeding with the necessary planning work to permit sections of the Torrens Island Power Station to be converted to use black coal.

For some years the Trust has been investigating sources of fuel for new generating plant following the installation of the two units at the Northern Power Station. Apart from Leigh Creek coal, there are several coal deposits of sufficient size to provide fuel for a minimum of 500 megawatts of generating plant. These deposits are situated at Kingston (SE), Sedan, Wakefield, Lochiel, Poldia, Lake Phillipson and Wintinna. Each of these deposits possesses one or more unfavourable factors such as high mining costs, unfavourable location or chemical impurities in the coal likely to cause combustion problems. Kingston (SE), Sedan, Wintinna and Lochiel appear the most favourable locations. Considerable work has been done on deposits including detailed mining studies and pilot combustion tests on bulk coal samples sent to West Germany and the United States. The Trust is building its own Combustion Test Rig at Osborne Power Station and this facility will enable the full range of coals from low grade lignites to high grade black coals to be tested in this State.

#### Electricity Trust of South Australia, Fuels Consumed in Power Stations

Year	Leigh Creek Coal	Oil	Distillate	Natural Gas
		Tonnes		Millions of MJ
1978-79 .....	1 603 000	70 300	2 010	52 900
1979-80 .....	1 672 000	45 400	590	54 400
1980-81 .....	1 650 000	12 200	350	57 300
1981-82 .....	1 446 000	18 800	500	61 200
1982-83 .....	1 410 000	15 400	380	64 500
1983-84 .....	1 250 000	6 200	110	63 000

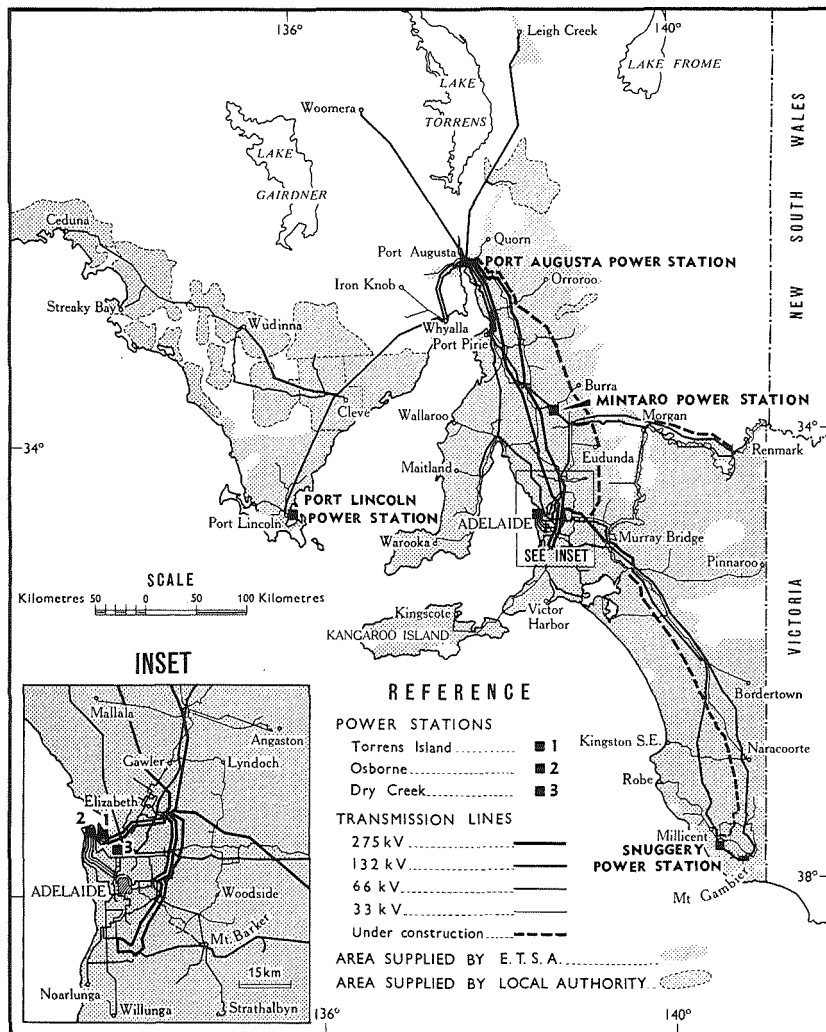
#### Transmission and Distribution

The Electricity Trust expanded its area of supply in the post-war years and this expansion required an extensive construction program of transmission and distribution lines. In the first ten years of the Trust's operations the length of transmission and distribution lines rose from 4 400 kilometres to 12 800 kilometres. Expansion over the next ten years was equally as active primarily because of the construction of 13 600 kilometres of the single wire earth return system. This system allows supply in country areas where consumers are so scattered that supply by conventional methods would be impracticable. Most of the settled areas of the State are now covered by the Trust's system and expansion in recent years has been to meet the increased load on the system.

Electric power is transmitted over considerable distances at very high voltages and is stepped down at sub-stations and distribution centres.

Transmission lines of 275 kV link power stations at Port Augusta and Torrens Island to the Para Sub-station from which 275 kV connections radiate to Magill, Cherry Gardens and Happy Valley sub-stations serving the Adelaide metropolitan area. A further 275 kV line has been built to the Tailm Bend Sub-station, which is the main supply point for the Lower Mallee and the South-East. One line from Port Augusta is

# SOUTH AUSTRALIA ELECTRICITY SUPPLY





tapped into a sub-station at Brinkworth to reinforce distribution to the mid-north area of the State. An additional 275 kV line from the new Port Augusta power station to the Adelaide metropolitan area is nearing completion. This line will be tapped into a new substation to be established near Robertstown to reinforce supply to the Upper Murray Region. Environmental impact studies are being done for a proposed 275 kV transmission line to extend the line from Port Augusta to the substation at Cherry Gardens.

### Electricity Trust of South Australia, Transmission Lines, at 30 June

Rated Voltage Unit	1979	1980	1981	1982	1983	1984
Route Kilometres						
275 kV .....	850	893	893	900	900	914
132 kV .....	2 595	2 595	2 606	2 608	2 633	2 846
66 kV .....	1 571	1 627	1 627	1 627	1 631	1 632
33 kV .....	3 701	3 659	3 686	3 694	3 693	3 705
19 kV (SWER)(a) .....	20 277	20 417	20 545	20 734	20 897	21 051
11 and 7·6 kV .....	15 002	15 447	15 867	16 206	16 522	16 913
Total .....	43 996	44 638	45 224	45 769	46 276	47 061

(a) Single wire earth return system.

Two 132 kV lines extend from Port Augusta to Adelaide and further 132 kV lines extend to Port Lincoln, Woomera, Leigh Creek and Wudinna on Eyre Peninsula. Other 132 kV lines connect Adelaide and Mannum, Cherry Gardens and Moblong, Mannum and Tailem Bend, Waterloo and Morgan, Morgan and Berri. Two lines connect Tailem Bend and Mount Gambier.

About ninety per cent of new housing subdivisions are underground mains areas. In these subdivisions 11 kV and low voltage lines are installed underground and developers pay the additional cost above that of conventional street mains. The Electricity Trust and local government authorities share the costs of conversion schemes from overhead to underground reticulation in areas where aesthetic benefit to the general public would be gained. One hundred and one such schemes have been approved.

The total number of consumers supplied directly by the Electricity Trust at 30 June 1984 was 586 375. During the past ten years, the number of consumers has increased by 109 440 or 23 per cent. The Trust indirectly supplies a further 9 000 consumers through a bulk supply system operated chiefly by local government authorities.

In the next table the numbers of Electricity Trust consumers in the various categories are given at selected dates.

### Electricity Trust of South Australia, Number of Consumers, at 30 June

Consumers	1980	1981	1982	1983	1984
Residential .....	470 918	477 549	484 275	491 748	501 934
Commercial .....	50 434	51 191	51 830	52 417	53 122
Industrial .....	29 923	30 295	30 752	31 113	31 303
Bulk and traction .....	17	17	17	17	16
Total .....	551 292	559 052	566 874	575 295	586 375

The next table shows the quantity of electricity sold by the Electricity Trust for the last five years.

**Electricity Trust of South Australia, Sales of Electricity, Year Ended 30 June**

Particulars	1980	1981	1982	1983	1984
	MWh				
Residential .....	2 382 745	2 502 023	2 609 296	2 727 266	2 624 891
Industrial .....	1 989 503	1 959 442	2 086 270	2 090 604	2 059 460
Commercial .....	1 144 681	1 232 760	1 289 915	1 344 950	1 348 184
Bulk supply .....	90 876	86 216	94 884	97 848	95 877
Public lighting .....	42 544	43 589	50 320	53 064	54 474
Pumping for major water pipelines .....	148 123	207 725	113 760	370 239	144 054
Total .....	5 798 472	6 031 755	6 244 445	6 683 971	6 326 940

### GAS

The South Australian Gas Company, a privately owned company regulated by State legislation, was incorporated by Act of Parliament in 1861 to supply gas to Adelaide and surrounding villages. The first gas was produced at Brompton in 1863 and subsequent plants were opened at Port Adelaide in 1866 and Glenelg in 1875.

An Act authorising a second company, the Provincial Gas Company, was assented to in 1869. This company established a metropolitan works at Thebarton in 1871 and country works were opened at Gawler, Kapunda and Strathalbyn. In 1878 this undertaking was absorbed by the South Australian Gas Company and manufacturing at the Thebarton plant ceased. The country works were kept in operation until 1917. Gas was first produced at Port Pirie in 1892.

Following the development of higher pressure distribution facilities the South Australian Gas Company was able to centralise its metropolitan production at Brompton with the Port Adelaide and Glenelg plants ceasing production in 1922 and 1923 respectively. These plants together with the earlier Thebarton works were retained as holder stations. In 1928 a new gas works was opened adjacent to the Port River at Osborne. The Osborne Works were closed for several years during the 1930s depression.

Since the 1939-45 War a considerable expansion of manufacturing capacity and distribution facilities has taken place. This is evident from the following table which gives details of capital employed, number of consumers and length of mains at 30 June in selected years.

**South Australian Gas Company: Capital, Consumers and Mains, At 30 June**

Particulars	1950	1960	1970	1980	1984
Capital employed (\$m) (a)	6.0	19.4	40.0	51.7	48.5
Number of consumers (b)	84 629	121 720	186 670	250 545	264 104
Length of mains (km) .....	1 677	2 525	3 603	4 967	5 255

(a) Total assets less current liabilities. (b) Includes consumers of bottled gas.

The manufacture of gas by the carbonisation of black coal imported from New South Wales was the conventional method of production until the end of the 1939-45 War. Under this process large quantities of coke and tar are produced as by-products but a declining market for these residuals together with the development of alternative production methods has resulted in less emphasis in recent years on this method of production.

In 1948 and 1950 the Company installed plant at Osborne and Brompton for the manufacture of carburetted water gas from oil distillate and coke. This plant was introduced to help meet peak winter loads and could be brought into production much more rapidly than carbonising retorts.

In 1964 the first of four reforming plants was installed at Brompton. These plants operated initially on refinery tail gases and modifications were subsequently made to enable all four plants to reform a wider range of feedstocks, including light virgin naphtha and natural gas. A similar plant was in operation at Port Pirie for reforming light virgin naphtha.

When natural gas became available, the South Australian Gas Company contracted with the producers for a supply of this indigenous fuel. Coal carbonising and carburetted water gas plants making gas for distribution in the metropolitan area were shut down and the reforming plants ceased to operate in 1971 when the conversion of all appliances to use natural gas was completed. One section of the coal carbonising plant was retained at the Osborne Works for the manufacture of metallurgical grade coke until 1979.

These contracts expire in 1987 and arrangements for future supplies are under consideration.

Port Pirie has been supplied with natural gas since June 1976. Natural gas has been supplied direct to industry, including Broken Hill Associated Smelters, and to all domestic consumers since conversion of domestic appliances to natural gas was completed in October 1977.

Natural gas is reticulated through most of the Adelaide metropolitan area, Angaston (since 1983) and Port Pirie. Liquefied petroleum gas is distributed by reticulation at Mount Gambier and at Whyalla, and is available elsewhere as bottled gas.

An inter-connected system of high and intermediate pressure mains traverses the metropolitan area, extending south to Moana, north-east to Tea Tree Gully and north to Gawler. The pressure in these mains is reduced by means of governors for distribution to consumers.

The conversion of the metropolitan distribution system to use straight natural gas brought a marked change in the Company's operations. The Company is now concerned largely with the distribution and marketing of gas, rather than manufacturing. Great emphasis is placed on marketing gas to industry, where as a cheap, non-polluting fuel it is able to compete successfully with other fuels. This has produced the situation where industrial gas sales made up 66.5 per cent of all gas sold in 1984 compared with 17 per cent in 1970.

## 8.7 HOUSING AND BUILDING

### HOUSING

A feature of housing development in South Australia has been the change from the use of stone to brick as the major building material. The familiar old-style stone houses are still to be seen in most of the settled parts of the State, especially in rural areas. The 1947 Census was the first at which houses with outer walls of brick outnumbered those with walls of stone.

The building materials used have been determined largely by the availability of building stone and deposits of clay suitable for brickmaking, and by the relative lack of natural timbers suitable for houses. In recent years brick veneer homes have become more popular, particularly in urban Adelaide, but this is partly because of the poor building soil in some areas.

### DWELLINGS: CENSUS DATA

Information on housing is obtained mainly from particulars of dwellings collected at each census. For the purpose of the census a 'dwelling' is any habitation occupied by a household group living together as a domestic unit, whether comprising the whole or only part of a building. The term 'dwelling' includes houses, home units and flats, and in addition habitations ranging from a single-roomed shack to a multi-roomed hotel or institution.

Dwellings have been classified as 'private' or 'non-private'. A private dwelling is normally a house or flat but it can also be a tent, houseboat, or caravan (if standing on its own block of land and not occupied by members of the same household resident in an adjacent dwelling). Non-private dwellings are hotels, hostels, hospitals, non-private boarding houses, gaols, religious and charitable institutions, defence establishments and other communal dwellings. A caravan in a caravan park (whether permanently or temporarily) is treated as part of a non-private dwelling, as are self-contained units provided by commercial enterprises such as hotels, motels or guest houses.

Dwelling counts from the nine censuses to 1981 are shown in the next table: figures for censuses before 1966 exclude dwellings occupied solely by full-blood Aboriginals.

#### Dwellings in South Australia Censuses 1921 to 1981

Census	Occupied			Unoccupied	Total Dwellings
	Private	Non-private	Total		
1921 .....	104 295	3 619	107 914	4 431	112 345
1933 .....	136 611	2 663	139 274	5 353	144 627
1947 .....	166 118	2 420	168 538	3 547	172 085
1954 .....	212 095	3 206	215 301	8 524	223 825
1961 .....	259 344	2 564	261 908	17 061	278 969
1966 .....	299 933	2 693	302 626	25 110	327 736
1971 .....	342 064	2 048	344 112	30 553	374 665
1976 .....	390 514	1 739	392 253	39 768	432 021
1981 .....	432 136	1 703	433 839	42 407	476 246

#### Occupied Dwellings

The next table gives details from the 1981 Census of dwellings and their occupants, according to the class of dwelling.

**Dwellings and Number of Inmates by Class of Dwelling, South Australia  
Census 1981**

Class of Dwelling	Dwellings		Persons	
	Number	Proportion of Total	Number	Proportion of Total
		Per cent		Per cent
Separate house .....	337 626	70.9	1 034 675	80.5
Semi-detached house .....	33 418	7.0	95 015	7.4
Row or terrace house .....	4 152	0.9	7 683	0.6
Medium density housing .....	47 224	9.9	79 668	6.2
Flats over three storeys .....	828	0.2	1 443	0.1
Caravan, houseboat etc. ....	1 094	0.2	2 288	0.2
Improvised home .....	697	0.1	1 890	0.1
Dwelling attached to non-dwelling .....	2 709	0.6	7 962	0.6
Not stated .....	4 389	0.9	12 000	0.9
<b>Total occupied private dwellings .....</b>	<b>432 136</b>	<b>90.7</b>	<b>1 242 616</b>	<b>96.7</b>
<b>Non-private dwellings .....</b>	<b>1 703</b>	<b>0.4</b>	<b>41 086</b>	<b>3.2</b>
<b>Total occupied dwellings .....</b>	<b>433 839</b>	<b>91.1</b>	<b>1 283 702</b>	<b>99.9</b>
<b>Campers out, migratory .....</b>	<b>..</b>	<b>..</b>	<b>1 331</b>	<b>0.1</b>
<b>Unoccupied private dwellings ..</b>	<b>42 407</b>	<b>8.9</b>	<b>..</b>	<b>..</b>
<b>Total dwellings and persons .....</b>	<b>476 246</b>	<b>100.0</b>	<b>1 285 033</b>	<b>100.0</b>

The classification of different types of dwellings changed between the 1976 and 1981 Censuses. Intercensal comparisons are therefore restricted to total dwellings only.

The percentage of persons enumerated in private dwellings was 96.1 at the 1971 Census, and by 1976 this percentage had increased slightly to 96.4. At the 1981 Census the percentage of persons enumerated in non-private dwellings had decreased to 3.2 while the percentage in private dwellings was 96.7.

### Occupied Private Dwellings

There were 390 514 occupied private dwellings at 30 June 1976 and by 30 June 1981 this number had increased to 432 136. Characteristics of these dwellings are shown in the tables which follow. The columns headed 'Separate Self-contained Dwellings' refer to those dwellings which were described by the householder as being self-contained and also stated as not being attached to any other dwelling.

The number of rooms includes kitchen and enclosed sleep-out, but does not include bathroom, toilet, pantry, laundry or storerooms or halls. A combined living-dining room was counted as one room.

In 1971 six-roomed dwellings were 20.3 per cent of all occupied dwellings. By 1976 this percentage had increased to 26.6; however, the 1981 Census shows a decline in six-roomed dwellings to 26.1 per cent.

**Occupied Private Dwellings by Number of Rooms, South Australia  
Censuses 1976 and 1981**

Number of Rooms per Dwelling	30 June 1976	30 June 1981			
	Total	Separate Self- contained Dwellings	Other	Total	Proportion of Total
					Per cent
1 .....	1 308	253	1 351	1 604	0.4
2 .....	4 578	1 002	2 888	3 890	0.9
3 .....	16 708	4 116	14 333	18 449	4.3
4 .....	48 946	25 997	34 273	60 270	13.9
5 .....	141 716	118 839	30 266	149 105	34.5
6 .....	103 824	105 866	6 813	112 679	26.1
7 .....	42 850	50 008	1 437	51 445	11.9
8 and over .....	25 512	29 651	1 025	30 676	7.1
Not stated .....	5 072	1 894	2 124	4 018	0.9
Total .....	390 514	337 626	94 510	432 136	100.0
Average number of rooms per dwelling (a) ..	5.4	5.8	4.3	5.4	..

(a) Excludes 'Not stated'.

The following table gives details of occupied private dwellings by the type of occupancy. The proportion of dwellings owned, or being purchased by instalments, increased from 67.6 per cent in 1976 to 69.3 per cent in 1981, whereas rented dwellings declined from 26.3 per cent to 25.5 per cent over the same period.

**Occupied Private Dwellings by Nature of Occupancy, South Australia  
Censuses 1976 and 1981**

Nature of Occupancy	30 June 1976		30 June 1981	
	Total	Proportion of Total	Total	Proportion of Total
		Per cent		Per cent
Owner .....	114 710	29.4	140 050	32.4
Purchaser .....	148 352	38.0	152 956	35.4
Owner/Purchaser undefined .....	1 114	0.3	6 253	1.4
Tenant of Housing Trust .....	36 224	9.3	41 486	9.6
Tenant, other .....	66 598	17.1	68 612	15.9
Other .....	17 992	4.6	14 718	3.4
Not stated .....	5 524	1.4	8 061	1.9
Total .....	390 514	100.0	432 136	100.0

### Occupied Private Dwellings: Number of Bedrooms by Type of Dwelling, South Australia Censuses 1976 and 1981

Number of Bedrooms per Dwelling	30 June 1976	30 June 1981					
	Total	Separate House	Semi- detached House	Row or Terrace House	Other Medium Density	Flats over 3 Stories	Other including Not Stated
0 .....	1 528	21	2	6	49	—	12
1 .....	22 418	8 047	2 212	1 318	13 218	185	1 982
2 .....	83 064	71 627	8 493	2 034	29 129	561	2 127
3 .....	221 976	215 631	20 864	663	3 821	62	2 882
4 .....	47 948	35 841	1 559	54	171	—	603
5 .....	6 766	3 708	38	7	28	—	92
6 or more .....	1 742	884	17	7	61	—	135
Not Stated .....	5 072	1 867	233	65	747	17	1 056
Total .....	390 514	337 626	33 418	4 152	47 224	825	8 889
							432 134

The five year period from 1976 to 1981 showed a significant increase in the number of two and three bedroom dwellings (37.2 per cent and 9.9 per cent respectively), but a decrease in four and five bedroom dwellings (20.3 per cent and 42.8 per cent).

At each Census since 1966 each householder was asked to state the number of motor vehicles used by members of that household (excluding motor cycles, scooters and tractors) which were garaged or parked at or near that dwelling on Census night. Data were obtained only for occupied private dwellings.

### Occupied Private Dwellings by Number of Motor Vehicles, South Australia Censuses 1971, 1976 and 1981

Number of Vehicles	1971		1976		1981	
	Dwellings	Proportion of Total	Dwellings	Proportion of Total	Dwellings	Proportion of Total
		Per cent		Per cent		Per cent
No vehicles .....	56 964	16.7	52 306	13.4	55 431	12.8
One vehicle .....	173 834	50.8	184 214	47.2	196 862	45.6
Two vehicles .....	78 907	23.1	108 262	27.7	125 806	29.1
Three or more vehicles .....	27 338	8.0	36 528	9.4	44 754	10.4
Not stated .....	5 021	1.5	9 204	2.4	9 283	2.1
Total .....	342 064	100.0	390 514	100.0	432 136	100.0

## BUILDING

### BUILDING CONTROL

The Building Act, 1923-1965 (the repealed Act) gave local government authorities power to control building operations within their municipality or district. This power was not automatic but followed a request from a local government authority for all, or a specified portion, of its area to be brought under the Act. The Building Act, 1970-1982 has brought each area of a local government municipality or district within the State under its provisions. However, the Act provides that any council to the area of which, or portion of the area of which, the repealed Act did not apply may petition the Governor for a proclamation that the Act (or any specified portion of the Act) shall not apply within its area or portion of its area.

Persons wishing to erect or alter buildings on land within an area to which the Building Act applies are required to submit to the local government authority technical details, particulars, plans, drawings and specifications of the work proposed and to receive written approval before commencing operations. Authorities are concerned with such things as the materials used, the height of ceilings and the provision of ventilation and

drainage. They have the power to disapprove building work only where such work does not comply with the requirements of the Act and the Building Regulations, 1973-1982, subject to a right of appeal to building referees. Following the approval of the building work, local government building inspectors normally visit the construction site to inspect footings and foundations and may visit the site at other times to check that the requirements of the regulations are being complied with.

The Builders Licensing Board of South Australia was established under the Builders Licensing Act, 1967-1983 to issue, subject to the provisions of the Act, general builders licences, provisional general builders licences and restricted builders licences to applicants.

### BUILDING ACTIVITY

From July 1980 the Building Activity Survey replaced the previous quarterly Building Operations Census. The quarterly survey consists of two components:

- (a) a sample survey of private sector house building activity involving new house construction or alterations and additions valued at \$10 000 or more to houses;
- (b) a complete enumeration of other building activity involving construction of new dwellings other than private sector houses, construction of new other buildings with an approval value of \$10 000 or more and all alterations and additions with an approval value of \$10 000 or more to buildings other than private sector houses.

The statistics relate to building activity which includes construction of new building and alterations and additions to existing buildings. Construction activity not defined as building (*e.g.* construction of roads, bridges, railways, earthworks, etc.) is excluded.

As a result of the introduction of sample survey techniques, statistics of commencements, completions, value of work done, etc. for building jobs involving new house construction or alterations and additions valued at \$10 000 or more to houses in the private sector are only available at the Australian and State/Territory levels.

Differences in concept between the Building Activity Survey and the previous Building Operations Census are minor but there is a break in the continuity of the statistics from the beginning of 1980-81. Building approval statistics are not subject to this break in series.

All values shown exclude the value of land and unless otherwise stated represent the anticipated or actual value of buildings upon completion.

#### Location of New Dwellings

In recent years the greatest development has occurred in the local government areas of Noarlunga, Salisbury and Tea Tree Gully. The number of new dwellings approved in these areas and other selected local government areas during the years 1980-81 to 1983-84 are included in the following table.

Location of New Dwelling Units Approved, South Australia

Local Government Area	1980-81	1981-82	1982-83	1983-84
Adelaide (C) .....	178	232	160	145
Burnside (C) .....	84	89	103	108
Campbelltown (C) .....	224	296	257	379
Enfield (C) .....	65	111	225	201
Gawler (M) .....	65	59	55	121
Glenelg (C) .....	48	181	34	37



## Location of New Dwelling Units Approved, South Australia (continued)

Local Government Area	1980-81	1981-82	1982-83	1983-84
Happy Valley (C) (a) .....	372	442	444	686
Hindmarsh (M) .....	25	22	159	59
Marion (C) .....	403	539	535	843
Mitcham (C) .....	237	206	174	331
Mount Barker (DC) (b) .....	128	149	181	356
Mount Gambier (C) .....	121	84	154	165
Munno Para (C) .....	183	168	261	799
Murray Bridge (DC) .....	168	117	98	152
Noarlunga (C) .....	298	460	800	1 298
Onkaparinga (DC) .....	60	45	87	66
Port Adelaide (C) .....	162	182	196	419
Port Augusta (C) .....	172	132	52	106
Port Elliot and Goolwa (DC) .....	142	155	153	313
Port Lincoln (C) .....	67	95	147	165
Salisbury (C) .....	648	489	574	1 145
Stirling (DC) .....	162	147	139	237
Tea Tree Gully (C) .....	633	509	560	930
Unley (C) .....	122	79	190	205
Victor Harbor (DC) .....	80	95	107	190
West Torrens (C) .....	153	100	170	167
Willunga (DC) .....	95	108	167	383
Woodville (C) .....	509	559	431	673
Other (c) .....	2 217	2 272	2 176	2 811
Total State .....	7 821	8 122	8 789	13 490

(a) Formerly Meadows (DC) (part A).

(b) Annexed portion of Meadows (DC) (part B) from 1/7/83.

(c) Includes unincorporated areas.

(C) Municipality with city status (M) Municipality (DC) District Council

## Building Approvals

The next table shows the value of new building, and alterations and additions valued at \$10 000 and over on completion for which approval was given during 1982-83 and 1983-84.

## Building Approvals, South Australia

Type of Building	1982-83			1983-84		
	Private	Public	Total	Private	Public	Total
	\$'000					
New houses .....	207 173	32 192	239 365	367 633	38 070	405 703
New other dwellings .....	44 738	36 275	81 011	86 912	38 982	125 894
Alterations and additions to dwellings .....	37 605	1 292	38 897	51 297	1 963	53 261
Hotels, etc. ....	16 097	185	16 282	9 807	533	10 340
Shops .....	28 651	55	28 709	38 301	9 186	47 487
Factories .....	27 090	6 653	33 743	22 248	3 213	25 461
Offices .....	34 366	26 595	60 961	45 835	56 904	102 739
Other business premises .....	24 984	10 045	35 029	37 426	11 952	49 377
Educational .....	10 875	38 034	48 909	11 000	45 751	56 751
Religious .....	4 341	—	4 341	2 728	20	2 748
Health .....	8 036	5 513	13 549	6 166	19 760	25 925
Entertainment and recreational .....	9 476	4 667	14 143	16 131	16 745	32 877
Miscellaneous .....	22 153	17 590	39 743	12 785	17 230	30 015
Total value of building .....	475 585	179 094	654 679	708 268	260 310	968 578

In addition to information on permits issued to private persons and organisations for building in areas subject to building control, particulars have been included of buildings known to be projected or to have been started in areas outside building control and details of contracts let or expenditure authorised by government and semi-government authorities.

In using approvals as an indicator of building activity it should be noted that certain projects may be cancelled, delayed or altered and resubmitted for approval, that large projects may be spread over a number of years, and that building costs may vary over the period of construction.

### Buildings Under Construction

At the end of 1983-84 buildings with an anticipated value when completed of \$498.7 million were in the process of construction, with work done on these buildings valued at \$240.3 million. There were 3 070 houses and 2 189 other dwellings in the course of construction, having an anticipated value when completed of \$228.5 million.

### Value of Work Done

One of the measures of building activity is that of value of work done, *i.e.* of work actually carried out on buildings during the period. Details of value of work done for the years 1979-80 to 1983-84 are given in the following table.

**Buildings: Value of Work Done**  
**South Australia**

Type of Building	1979-80	1980-81	1981-82	1982-83	1983-84
			\$'000		
Houses .....	227 887	231 411	219 838	225 856	347 903
Other dwellings .....	37 767	39 880	61 984	86 490	116 649
Total dwellings .....	265 654	271 291	281 820	312 345	464 552
Alterations and additions to dwellings .....	25 501	35 014	34 625	38 127	48 391
Hotels, etc. ....	13 956	13 250	36 754	13 996	15 179
Shops .....	44 868	37 400	35 942	23 948	43 930
Factories .....	25 973	27 294	51 874	37 324	28 010
Offices .....	50 239	60 819	44 597	69 462	76 304
Other business premises .....	25 635	19 004	28 675	43 958	35 679
Educational .....	36 871	36 371	34 145	40 653	51 493
Religious .....	2 263	5 015	4 811	5 445	2 760
Health .....	19 709	22 590	20 379	17 104	16 935
Entertainment and recreational .....	19 058	22 336	17 499	14 543	21 635
Miscellaneous .....	21 921	36 008	36 328	46 790	35 042
Total buildings .....	551 645	586 389	627 451	663 694	839 910

### Buildings Commenced

A building is regarded as having been commenced when expenditure on building work is first reported. In the following table, commencements during 1982-83 and 1983-84 have been classified according to ownership at the date of commencement.

**Buildings Commenced, South Australia <sup>(a)</sup>**

Type of Building	1982-83			1983-84		
	Private	Public	Total	Private	Public	Total
	\$'000					
New houses .....	193 378	33 493	226 871	343 439	35 269	378 708
New other dwellings .....	44 472	38 959	83 431	86 660	41 179	127 839
Alterations and additions to dwellings ..	36 547	1 222	37 769	48 155	1 344	49 500
Hotels, etc. ....	16 051	185	16 236	10 266	480	10 746
Shops .....	48 280	401	48 681	18 102	9 351	27 453
Factories .....	20 378	6 698	27 076	24 261	3 346	27 607
Offices .....	35 392	26 538	61 930	45 549	28 375	73 923
Other business premises .....	21 873	12 134	34 007	45 035	7 902	52 937
Educational .....	10 088	33 650	43 738	11 396	50 135	61 531
Religious .....	4 744	—	4 744	2 554	20	2 574
Health .....	7 663	4 972	12 635	7 682	17 337	25 019
Entertainment and recreational .....	10 421	4 365	14 786	12 600	17 244	29 844
Miscellaneous .....	18 405	18 817	37 222	12 819	17 231	30 050
Total value of buildings .....	467 696	181 428	649 124	668 518	229 213	897 730

(a) Anticipated completion value.

**Buildings Completed**

Details of new dwellings and buildings completed for the years 1979-80 to 1983-84 are given in the next two tables.

**Number of New Dwelling Units Completed, South Australia**

Type of Dwelling	1979-80	1980-81	1981-82	1982-83	1983-84
Private:					
Houses(a) .....	5 834	5 170	4 610	4 600	6 440
Other dwellings .....	1 044	986	1 156	1 264	1 551
Total private dwellings(a) .....	6 878	6 160	5 770	5 870	7 990
Public:					
Houses .....	817	1 199	997	910	1 063
Other dwellings .....	610	674	552	1 130	1 408
Total public dwellings .....	1 427	1 873	1 549	2 040	2 471
Total all dwellings(a) .....	8 305	8 030	7 320	7 910	10 460

(a) From 1980-81 numbers are rounded to the nearest ten units.

**Buildings Completed, South Australia**

Year	Number of Dwelling units		Value of Building				Total
	Houses (a)	Other Dwellings	Houses	Other Dwellings	Alterations and Additions to Dwellings	Other	
	\$'000						
1979-80 .....	6 651	1 654	226 291	40 008	25 099	297 634	589 033
1980-81 .....	6 370	1 660	231 094	41 260	33 353	248 857	554 565
1981-82 .....	5 610	1 708	221 749	47 823	35 603	249 877	555 052
1982-83 .....	5 510	2 394	227 688	89 344	38 470	320 582	676 085
1983-84 .....	7 500	2 959	319 566	96 456	46 924	373 687	836 633

(a) From 1980-81 number of houses is rounded to the nearest ten units.

The value of buildings, other than dwellings completed over the same period is shown below. Included under 'other business premises' are service stations, warehouses and communication buildings and under 'miscellaneous' are defence establishments, buildings for law and order, and certain institutional premises.

## Value of Buildings Other Than Dwellings Completed, South Australia

Type of Building	1979-80	1980-81	1981-82	1982-83	1983-84
			\$'000		
Hotels, etc. ....	12 496	6 596	9 567	46 056	11 678
Shops .....	64 153	39 521	28 568	30 525	35 006
Factories .....	29 659	20 727	34 540	47 985	44 812
Offices .....	46 485	61 050	45 190	34 797	101 763
Other business premises .....	25 118	20 999	21 194	44 066	35 585
Educational .....	38 704	31 874	30 958	42 559	44 142
Religious .....	2 085	5 185	3 911	6 220	2 417
Health .....	35 779	13 203	25 613	21 216	17 837
Entertainment and recreational .....	18 333	24 316	13 034	18 303	19 676
Miscellaneous .....	24 825	25 384	37 302	28 853	60 773
Total .....	297 634	248 857	249 877	320 582	373 687

## THE SOUTH AUSTRALIAN HOUSING TRUST

The South Australian Housing Trust was established under the South Australian Housing Trust Act, 1936. In 1940, when the Housing Improvement Act was assented to, the Trust became the housing authority to administer the Act and the Trust's powers were extended.

Founded to provide housing for those in need, at a price within their capacity to pay and near to places of employment, the Trust has developed and changed its policies throughout its history to meet changing needs. In the late 1940s the Trust's prime concern was the alleviation of the housing shortage. In the 1950s and early 1960s the Trust was a total development authority, fostering both industrial development and new areas of residential settlement. More recently, the Trust has again concentrated on meeting housing needs including the development of new forms of housing and housing assistance.

**Rental Dwellings**

At 30 June 1984 the Trust rental stock comprised 50 914 rental dwellings. This total consisted of 29 272 attached houses, 2 798 flats, 10 221 single detached houses, 4 076 pensioner cottage flats all built by or for the Trust; and 3 381 existing dwellings purchased, 1 123 Aboriginal funded units and 43 houses leased from the private sector.

Weekly rents of five roomed (three bedrooms) semi-detached bungalows ranged from \$38.50 to \$44.00, while rents on single detached houses ranged between \$49.00 and \$65.00 per week. Two bedroomed villa flat rents ranged from \$43.50 to \$46.00 per week whilst the weekly rentals of two and three storey flats in the Adelaide metropolitan area ranged from \$35.00 for one bedroomed flats to \$40.00 for two bedroomed flats. Rentals for attached, one and two storey maisonettes and town houses with three bedrooms generally ranged between \$48.50 and \$61.50 per week.

The exceptions were town houses at West Lakes, Hackney, Kent Town and in the City of Adelaide where rents range from \$54.50 for two bedroom houses to \$95.00 for three bedroom houses with a family room.

A record total of 15 649 applications for rental accommodation were registered during 1983-84 compared with 15 596 in the previous year.

The total waiting list at 30 June 1984 was 32 860. The majority of these applicants are people experiencing a combination of financial hardship and social disadvantages. They include lone parents, the elderly, the disabled and the unemployed. Approximately 95 per cent of applicants for Trust rental accommodation in 1983-84 had incomes of less than 85 per cent of average weekly earnings at the time of application.

To assist those who have difficulty in meeting the rent required, the Trust has developed a rent reduction scheme. At 30 June 1984, 64 per cent of the Trust's tenants were paying reduced rents related to their income. This cost the Trust \$32 million in the amount of rent foregone during 1983-84.

### **Housing for Aboriginals**

The Trust, in association with the Aboriginal Housing Board of South Australia administers the Aboriginal Funded Program, to supply much needed, special housing assistance to Aboriginal families throughout the State. The scheme maintains a high percentage of Aboriginal involvement at every level of the program.

Housing Management Committees comprising elected Aboriginals are established in eight regions of the State and assist with the allocation of houses and tenancy matters.

Representation from these committees, together with several government departments and agencies, form the Aboriginal Housing Board which considers policy, programming and the financial aspects of the Funded Program. The Trust believes this co-operative arrangement ensures that Aboriginal needs and desires are effectively expressed and met.

A total of \$5.6 million was made available for Aboriginal housing in 1983-84. There were 60 houses added to the program during the year bringing the total number of houses used exclusively for Aboriginals to 1 123. In addition, many Aboriginal families were housed through the Trust's general program. A total of 335 applications were received under the program and 219 new tenants were housed.

### **Housing for the Aged**

In 1953 the Trust began building cottage flats principally for aged pensioners. By 30 June 1984 the Trust had built and let 4 076 cottage flats and built 1 086 units for charitable and non-profit organisations. One bedroom cottage flat rents ranged from \$11.00 per week for a single person to \$18.50 for married couples, while two bedroom rents ranged from \$13.50 for a single person to \$22.50 for couples.

The rents of all Trust accommodation occupied by the aged are heavily subsidised and the growing proportion of the elderly in the community has major financial as well as social implications for the Trust.

### **Purchase of Houses for Rental Purposes**

In the year ended 30 June 1984 the Trust purchased a further 578 established houses contributing to a total of 3 381 acquired and let since 1973. After renovation these houses are let to applicants whose particular circumstances require that they live in suburbs generally within the central metropolitan area where the Trust can no longer acquire land for new construction. These suburbs generally have the advantage of better established services such as public transport, kindergartens, schools, medical, para-medical and other support services.

### **Special Purpose Housing**

The Trust continued in 1983-84 to provide rental accommodation to various public, private and voluntary organisations whose work caters for the needs of some of the disadvantaged members of the community; in particular, the handicapped, the aged, lone parents with dependent children and homeless youth.

### **Priority Housing Assistance**

There were 686 requests for assistance under the Trust's Priority Referral Scheme in

the year 1983-84. These were received from the Department for Community Welfare and other agencies; public, private and voluntary.

Of the 686 referrals received, 400 (58 per cent) were afforded a priority in housing, each submission having been considered on its merits.

### **Assistance for Home Ownership**

#### *Mortgage Relief*

The scheme began in August 1982 for the purpose of helping low income earners experiencing difficulty in meeting their mortgage commitments. Relief is available to households with gross incomes of \$318·00 per week or less, an outstanding mortgage of \$45 000 or less and with no other property which could be occupied or sold.

Assistance is provided in weekly amounts of up to \$30·00 and is paid direct to the lender. Once relief is discontinued, repayment terms are negotiated.

During 1983-84, 586 applications were lodged for mortgage relief and 419 families were approved. At 30 June 1984, 423 households were in receipt of mortgage relief.

#### *Rental Purchase Scheme*

In conjunction with the State Bank of South Australia, the Housing Trust launched this scheme in October 1983. The aim of the scheme is to assist low income households who would not otherwise be able to buy a home. The Trust buys a property of the household's choice, then receives rent payments equivalent to home loan repayments. Ownership is transferred on completion of the repayment period.

The maximum housing loan available through the scheme is \$38 000, with a minimum deposit of \$500. With a larger deposit, a house may be purchased to the value of \$55 000.

During 1983-84, 1 287 applicants listed for Rental Purchase through the agency of the Trust and ninety sales actually occurred.

### **Rent Relief Scheme**

The Rent Relief Scheme commenced in September 1982 with funds made available by both the Commonwealth and State governments. The funds are to provide assistance to persons or families on low incomes who face genuine hardship in meeting rental commitments.

Requirements of the scheme are that the household income be less than \$300 per week; that there must be no other property which could be occupied or sold; and difficulty in meeting the rent or finding affordable accommodation must be experienced. If these requirements are fulfilled then relief in the form of a grant of up to \$30·00 per week will be paid direct to the renter.

During 1983-84, 8 806 applications were lodged for rent relief and 7 047 were approved. At 30 June 1984, 5 682 households were in receipt of assistance.

### **Dwelling Construction Program**

All Trust dwellings are built by private building contractors. In the majority of cases the Trust designs the dwellings, tenders the work out and then provides architectural supervision to the successful tenderer until completion. However, in recent years the concept of 'design and construct' has become a significant mechanism in the Trust's building program. Under this scheme private builders offer dwellings of their own design to be constructed on their own land. On acceptance in principle, the construction is completed with no architectural supervision by the Trust. When the dwellings are satisfactorily completed, the Trust pays the total agreed sum (*i.e.* no progress payments are made) and the houses are offered to waiting applicants.

Details of dwellings completed by the Trust since its inception, both for rental and sale, are given in the following table.

**South Australian Housing Trust, Number of Dwellings Completed**

Period	Dwellings				Total
	Single Units	Attached Houses	Cottage Flats	Flats	
1937-1979 .....	(a) 52 735	27 716	2 982	2 523	85 956
1979-80 .....	938	117	292	61	1 408
1980-81 .....	879	307	225	11	1 422
1981-82 .....	709	167	310	34	1 220
1982-83 .....	854	413	568	109	1 944
1983-84 .....	962	549	785	15	2 311
Total .....	57 077	29 269	5 162	2 753	94 261

(a) Includes 2 909 emergency and temporary dwellings (which have since been removed) and 1 234 rural and soldier settlers dwellings.

### Industrial and Commercial Properties

In conjunction with the Department of State Development, the Trust provides a substantial contribution to the Government's program for the establishment of new industry and the expansion of existing industry within South Australia. This support takes the form of developing and making available industrial land for sale and lease and the provision of resources for the establishment of factory premises through the Trust's Factory Construction Scheme.

During 1983-84 the Trust sold land in industrial estates located in the following areas; Elizabeth West, Salisbury South, Smithfield Plains, Whyalla, Windsor Gardens and Murray Bridge.

Construction of a new office building was commenced at Holden Hill to enable a high technology manufacturing company to expand.

Further development of commercial and community facilities at Noarlunga Centre proceeded with the construction of a waterslide and pedestrian plaza, and negotiations were completed for the establishment of a health village.

Redevelopment of Elizabeth City Centre continued.

Sales of commercial land took place for a shopping centre at Novar Gardens and a 10-Pin Bowling Alley at Elizabeth.

Shopping centres located at Parkholme, Seacombe Gardens, Morphettville and Seaton were sold, and shopping centres at Ferryden Park, Findon, Northfield, Glenelg North and Woodville Gardens were committed for sale.

### Sub-standard Housing

To regulate the rents for sub-standard housing the Housing Improvement Act, 1940-1983 vests in the South Australian Housing Trust power to declare a house sub-standard, and fix a maximum rent on it for such time as the declaration remains in force.

During 1983-84 the Trust issued 233 notices of intention for sub-standard housing under the Act.

Also during the year, the Trust inspected 1 905 houses. 144 houses were declared to be sub-standard, rents were fixed or revised in respect of 357 houses, and 239 houses were released from control of the Act as a result of repairs and renovations.

## HOUSING AGREEMENTS

Several Housing Agreements between the Commonwealth and the State have operated over the years and details of the earlier legislation were included on pages 374-5 of the *South Australian Year Book* 1978.

Under current Commonwealth legislation, grants of \$51.4 million were made available to the South Australian Housing Trust during 1983-84 as part of the Commonwealth-State Housing Agreement. In addition Commonwealth advances of \$9 000 were made available to the Trust for Servicemen's Housing.

## FIRST HOME OWNERS SCHEME

The Commonwealth Government's First Home Owners Scheme, effective from 1 October 1983, replaced the Home Deposit Assistance Scheme. This new scheme is administered by the Department of Housing and Construction.

Under this scheme people buying or building their first home, on or after 1 October 1983, may be eligible for a grant up to \$7 000.

The combined taxable income of the person or persons applying is subject to an income test.

For homes acquired after 22 August 1984, a full payment may be made to a married couple where the applicants' combined taxable income for 1983-84 does not exceed \$20 000, a reduced benefit may be paid if that income is between \$20 000 and \$27 900 and no benefit is payable if the income is \$27 900 or greater. For a single applicant, the income test limits are halved. Different conditions apply to homes acquired before 22 August 1984.

## DEFENCE SERVICE HOMES SCHEME

The *Defence Service Homes Act 1918* assists certain former and serving members of the Defence Force to acquire a home on concessional terms.

The Defence Service Homes Corporation is, subject to the direction of the Minister for Veterans' Affairs, responsible for the administration of the Defence Service Homes Act.

Persons eligible for assistance under the Act include members of the Australian forces and nursing services enlisted or appointed for or employed on active service outside Australia or on a ship of war during the 1914-18 and 1939-45 Wars; persons who served in the operations in Korea or Malaya or who have served on 'special service' as defined in the *Repatriation (Special Overseas Service) Act 1962*; and members of the Defence Force who serve on continuous full-time service and national servicemen whose periods of service ended not earlier than 7 December 1972 and who meet certain prescribed conditions. The categories of eligible persons also include the widows and, in some circumstances, the widowed mothers of eligible persons, and persons domiciled in Australia and employed in certain sea-going service during the 1914-18 and 1939-45 Wars.

The following loan conditions have applied since 20 August 1980. The maximum loan available is \$25 000 and the interest rate is 3.75 per cent for the first \$12 000 lent, 7.25 per cent on the balance of the loan above \$12 000, but not in excess of \$15 000, and 10 per cent on the balance above \$15 000. The maximum repayment period permitted by the Act is 45 years or, in the case of the widow or widowed mother of an eligible person, 50 years. Normally however, the repayment period is limited to 32 years.



Defence Service Homes Scheme, South Australia <sup>(a)</sup>

Year	Activities During Year			Number of Loan Accounts at 30 June
	Loans Granted	Capital Expenditure	Loan Repayments	
		\$'000	\$'000	
1979-80 .....	450	6 235	7 361	15 600
1980-81 .....	495	8 413	8 096	15 099
1981-82 .....	709	15 299	7 921	14 871
1982-83 .....	669	15 500	8 117	14 649
1983-84 .....	580	13 213	9 936	14 181

(a) Includes Northern Territory.

Since the inception of the Defence Service Homes Scheme in 1919, 409 796 loans have been granted to persons eligible for assistance under the Act. All figures shown include homes which were provided originally under the Housing Agreements with the States, and taken over in accordance with those agreements.

## HOUSING LOANS INSURANCE CORPORATION

The Housing Loans Insurance Corporation was established by the *Housing Loans Insurance Act 1965* to administer the Commonwealth Government's Housing Loans Insurance Scheme under which approved lenders may be insured against losses arising from the making of housing loans. The Corporation consists of a Chairman (who is also Managing Director) and a Deputy Chairman, who are full-time members, and three part-time members, all of whom are appointed by the Governor-General.

An amendment to the Act in 1977 broadened the scope of the Corporation's activities so that loans for the purchase of vacant land and commercial housing propositions are insurable as well as loans for the purchase or construction of homes for owner occupancy. The Act was further amended in 1983 to permit the Corporation to insure loans for the purchase, construction and improvement of commercial buildings and structures.

Owner occupancy loans are insurable without limit on loan amount, interest rate or term. Loans for the purchase of vacant land are insurable where the borrower intends to erect his home at a later date. In the commercial field, loans for rental housing ranging from single houses or home units to multi-storey structures together with loans for the purchase and development of land and the building of project housing (including home units) are acceptable.

A once only premium is charged by the Corporation at the time the loan is made. The premium is payable by the borrower but lenders may agree to add it to the amount of the loan for repayment by the borrower over the period of the loan. With owner occupancy loans comprising 94 per cent and 95 per cent of the valuation of a home the premium is 1.4 per cent of the amount of the loan. Loans from 95 per cent to 100 per cent of valuation carry a loading of 10 per cent on the maximum 1.4 per cent rate. On loans less than 94 per cent of valuation, the premium falls progressively down to 0.25 per cent on loans of less than 76 per cent of valuation, except that a concessional premium of 0.1 per cent is applicable where the loan is less than 76 per cent of valuation and relates to an owner occupied home. Premium rates for the purchase of vacant land are the same as for home ownership.

The Corporation will insure a loan made to enable a borrower to buy or build a house, to buy a home unit, or to discharge an existing mortgage. Loans for alterations and extensions and loans to meet expenses of providing or improving lighting, sewerage,

drainage, fences, roads, etc. are also insurable. In addition to loans secured by a registered first mortgage, there is provision for the insurance of second mortgage loans and cover is available for amortised, fixed term or five-year loans.

#### Further References

Additional information may be found in the following publications:

- 8731.0 *Building Approvals—Australia*
- 8731.4 *Building Approvals—South Australia*
- 8740.4 *Dwelling Unit Commencements Reported by Approving Authorities (Preliminary)—South Australia*
- 8741.4 *Dwelling Unit Commencements Reported by Approving Authorities—South Australia*
- 8750.0 *Building Activity: Dwelling Unit Commencements (Preliminary Estimates)—Australia*
- 8751.0 *Building Activity (Summary)—Australia*
- 8752.0 *Building Activity—Australia*
- 8752.4 *Building Activity—South Australia*

## **PART 9**

# **PRODUCTION**

## **9.1 RURAL INDUSTRIES**

South Australia has a semi-arid Mediterranean type climate with mild and humid winters and hot and dry summers. Cereal production and livestock are the main components of agriculture.

The State can be divided into three main zones based on rainfall. The dry inland area is known as the pastoral zone with the main activity being low intensity grazing of livestock. In the cereal zone of intermediate rainfall, major production is of cereal and livestock products. The higher southern rainfall zone has a more reliable growing season and farming is based on higher intensity grazing of sheep and cattle on improved pasture, as well as cereal and horticultural crops. Areas adjacent to the River Murray and to Adelaide are devoted mainly to horticulture and viticulture.

### **RURAL INDUSTRY ORGANISATIONS**

The South Australian Department of Agriculture provides advisory, regulatory and research services to all farming industries in this State. These services are complemented by educational and research organisations (see Part 6.2 Education and Part 6.3 Scientific and Research Organisations) and private firms which also provide expertise in the field of agriculture. Other organisations, many established by State or Commonwealth legislation, also influence the State's rural industries. The following table gives details of some of these bodies.

### Rural Industry Organisations and Major Activities, South Australia

Organisation	Activities
Australian Wheat Board	Sole authority for receival and marketing of wheat.
Australian Barley Board	Provides a marketing system for barley and oats.
South Australian Co-operative Bulk Handling Ltd	Bulk handles wheat, barley and oats in South Australia.
Australian Wool Corporation	Controls marketing of wool in Australia and overseas.
Australian Meat and Livestock Corporation	Promotes the sale of meat and livestock in Australia and overseas.
South Australian Potato Board	Regulate marketing and pricing of their respective products.
Dried Fruits Board	
Citrus Industry Organisation Committee of SA	
South Australian Egg Board	
Metropolitan Milk Board	Regulate production and marketing of their respective products in the Adelaide metropolitan area.
South Australian Meat Corporation	

### RURAL INDUSTRY ASSISTANCE

Details of financial assistance provided to the rural sector by the State Government are given in Part 4.2 Land Settlement Schemes.

### RURAL STATISTICS

Most rural statistics are prepared from the annual Agricultural Census in which returns are collected from establishments with agricultural activity, regardless of the main activity of the establishment. Particulars relate to rural operations for one complete year ended 31 March, but where harvesting of some crops (mainly fruit) has not been completed by that date, growers are asked to estimate production or provide details at a later date *via* supplementary collections (*e.g.* main crop potatoes and grapes). An owner or occupier who works more than one rural establishment is normally required to report details for each. However, where they are near to one another and are in effect worked as one, a composite return is obtained, and is treated as covering a single rural establishment in the district in which the main farm is situated.

In recent years, in order to minimise respondent burden and reduce processing costs, the ABS has been gradually excluding from the census those establishments which make only a small contribution to overall agricultural production. Thus establishments with agricultural activity were included in the Censuses of 1982-83 and 1983-84 if they had, or were expected to have, an estimated value of agricultural operations of \$2 500 or more. Before 1982-83 the value cut off was applied at the enterprise level; for 1981-82 the value was \$2 500 and for earlier years, \$1 500.

While these changes have resulted in a reduction in the numbers of establishments appearing in publications, the effect on the statistics of production of major commodities is small. Statistics of minor commodities normally associated with small scale operations may be affected to a greater extent.

The number and area of rural establishments, *i.e.* establishments with an estimated value of agricultural operations above the cut-off, in each statistical division for the past two years are shown in the following table.

## Rural Establishments: Statistical Divisions, South Australia

Statistical Division	Establishments(a)		Area of Establishments	
	1982-83	1983-84	1982-83	1983-84
	Number		'000 hectares	
Adelaide .....	1 941	1 660	57	54
Outer Adelaide .....	4 630	4 229	914	902
Yorke and Lower North .....	2 977	2 831	1 850	1 834
Murray Lands .....	4 658	4 478	4 138	4 094
South East .....	3 302	3 164	1 790	1 759
Eyre .....	1 990	1 949	5 705	5 642
Northern .....	1 674	1 612	45 741	47 778
Total .....	21 172	19 923	60 196	62 063

(a) Beekeepers without a fixed land-base are included in statistical divisions.

In 1975 additional information was sought to assess structural details of the agricultural industry in Australia to enable compatibility and comparisons with other industries through financial data.

The economic units defined are similar to those used for other industries, namely the enterprise and the establishment. The identification of these units within the agricultural sector has allowed the production of more meaningful statistics of economic size, legal status and industry classification. It has also provided some insight into the activities of agricultural enterprises in other sectors of the economy and the activities of non-agricultural enterprises in the agricultural sector.

The enterprise is that unit comprising all operations in Australia of a single operating legal entity. An agricultural enterprise is an enterprise mainly engaged in agricultural activities. The estimated value of operations of these enterprises includes the estimated value of non-agricultural operations.

The establishment is the smallest economic unit in the system. An agricultural establishment is an establishment which is engaged mainly in agricultural activities. The estimated value of operations of these establishments includes the estimated value of non-agricultural operations.

The following table shows the number of agricultural enterprises in South Australia cross-classified by industry and estimated value of operations. Further details are contained in the publication *Agricultural Sector, Australia—Structure of Operating Units* (Catalogue No. 7102.0) published by the Australian Statistician.

Agricultural Enterprises: Industry and Estimated Value of Agricultural Operations  
South Australia, 1983-84 p

ASIC Code (a)	Industry of Enterprise	Estimated Value of Operations (\$'000)					Total Enter- prises
		3-19	20-49	50-99	100-199	200 and more	
0124	Poultry for meat .....	5	10	25	17	9	66
0125	Poultry for eggs .....	21	10	11	22	34	98
0134	Grapes .....	589	722	237	36	26	1 610
0136	Orchard and other fruit .....	502	502	325	110	49	1 488
0143	Potatoes .....	18	24	23	36	52	153
0144	Vegetables (except potatoes) .....	344	213	71	65	63	756
0181	Cereal grains (incl. oilseeds n.e.c.) .....	320	417	832	1 081	605	3 255
0182	Sheep—cereal grains .....	336	993	1 700	1 261	322	4 612

**Agricultural Enterprises: Industry and Estimated Value of Agricultural Operations**  
**South Australia, 1983-84 p (continued)**

ASIC Code (a)	Industry of Enterprise	Estimated Value of Operations (\$'000)					Total Enter- prises
		3-19	20-49	50-99	100-199	200 and more	
0183	Meat cattle—cereal grains .....	35	33	28	25	10	131
0184	Sheep—meat cattle .....	209	233	245	187	91	965
0185	Sheep .....	729	656	674	365	93	2 517
0186	Meat cattle .....	580	118	83	33	35	849
0187	Milk cattle .....	179	508	478	116	20	1 301
0188	Pigs .....	76	80	60	63	36	315
0195	Nurseries .....	33	61	50	33	31	208
0196	Agriculture n.e.c. ....	412	148	58	23	9	650
Total (ASIC 01) .....		4 388	4 728	4 900	3 473	1 485	18 974

(a) ASIC 1978 edition.

### Agricultural Finance Survey

Estimates of the financial performance of the rural sector of the economy are derived from information obtained in the Agricultural Finance Survey. Before 1977-78 this was an annual collection, but is currently an occasional collection which samples a representative cross-section of all agricultural enterprises in Australia.

Since 1976-77 the Agricultural Finance Survey has been conducted using a single (field) phase sample of approximately 3 500 enterprises throughout Australia, the interviews with selected businesses being carried out by trained ABS interviewers over a six-month enumeration period.

### Financial Estimates of Agricultural Enterprises: South Australia

Items	1977-78		1980-81	
	\$m	SE%	\$m	SE%
Sales of crops .....	187.0	5	559.3	4
Sales of livestock .....	156.0	5	278.1	5
Sales of livestock products .....	170.4	4	281.9	4
Turnover .....	530.3	3	1 143.5	2
Purchases and selected expenses .....	266.9	3	515.2	3
Value added .....	234.7	6	651.8	3
Adjusted value added .....	198.8	6	594.6	4
Gross operating surplus .....	142.6	9	508.7	4
Cash operating surplus .....	149.0	8	448.7	5
Total net capital expenditure .....	69.0	9	184.4	6
Gross indebtedness .....	323.5	8	571.0	8

The above table contains estimates of selected financial aggregates of South Australian agricultural enterprises for the years 1977-78 and 1980-81; the associated standard error (SE) for each estimate is also given, being a measure of the sampling error resulting from the use of sampling techniques as opposed to undertaking a complete census. More detailed information both on the statistics shown and the terms used are contained in the publication *Agricultural Industries—Financial Statistics—Australia* (Catalogue No. 7507.0) published by the Australian Statistician.

Caution should be exercised when making comparisons between estimates derived from the Agricultural Finance Survey and those compiled annually by ABS in its Value

of Agricultural Commodities Produced series. Some of the major reasons for differences between the estimates are as follows:

- (1) to enable a comparison to be made with statistics produced for other sectors of the economy, the Survey is conducted on an integrated basis which excludes from the survey enterprises which undertake some agricultural activity but their predominant activity is non-agricultural;
- (2) the Value of Agricultural Commodities Produced series measures the income accruing from production for a particular year irrespective of whether the total production has been marketed or not. The Survey on the other hand operates generally on a cash basis recognising income only when payment has been received;
- (3) the Survey includes only the value for crops sold, whereas the Value of Agricultural Commodities Produced figures include the value of crops and seed produced and consumed on the farm.

### LAND UTILISATION

Most of the land area of South Australia is arid or semi-arid and cannot be used for crop production. This severe natural limitation means that even with modern farming methods only 6 million of 63 million hectares in rural establishments are devoted to cropping or permanent improved pasture.

As shown in the following table the area under crop in recent years has varied between 2.77 and 3.10 million hectares. Most of this is planted to cereals for the production of grain, hay and forage and about 155 400 hectares are used for the production of fruit and vegetables.

Land Utilisation of Rural Establishments, South Australia

Particulars	1979-80	1980-81	1981-82	1982-83	1983-84
'000 hectares					
Area used for:					
Crops (a) .....	2 771	2 773	2 865	2 856	3 108
Sown pastures;					
Lucerne .....	63	52	49	42	51
Lucerne based .....	502	506	488	466	455
Clovers, grasses and medics ....	2 646	2 629	3 106	2 947	3 021
Total area of holdings .....	62 786	62 437	62 897	60 196	62 063

(a) Excludes duplication on account of area double cropped for 1979-80 and 1980-81. Excludes pastures harvested for hay and seed which have been included in 'Area used for sown pastures'.

The cereals—wheat, barley and oats—sown for grain account for about 92 per cent of the total area cropped in South Australia. In addition to hay and green forage the remainder of the area is devoted mainly to orchards, vineyards and vegetable production. Climatic conditions, particularly the relatively low winter rainfall and the dry hot summer, favour cereal growing, one advantage being the low incidence of stem rust, a serious disease in the moister areas of the Australian wheat belt.

The area sown to the more important crops during the last five seasons is given in the following table.

## Area Sown to Principal Crops, South Australia

Crop	1979-80	1980-81	1981-82	1982-83	1983-84
'000 hectares					
Cereals for grain:					
Wheat .....	1 424.2	1 445.3	1 427.5	1 398.0	1 564.0
Barley .....	983.6	988.5	1 031.7	1 005.0	1 103.8
Oats .....	129.0	105.5	127.3	123.6	153.4
Rye .....	17.9	15.3	25.9	30.9	35.0
Crops for hay:					
Oaten .....	35.4	32.2	42.7	41.0	51.2
Other .....	13.2	12.6	17.6	27.4	18.6
Crops for green forage .....	44.3	40.1	47.3	94.4	40.2
Vegetables:					
Potatoes .....	3.5	3.8	3.7	3.8	4.2
Tomatoes .....	0.4	0.4	0.4	0.3	0.3
Other .....	3.4	3.6	3.6	3.5	3.5
Fruit:					
Orchards .....	15.7	15.8	16.0	15.9	15.8
Vineyards .....	30.7	30.4	30.3	29.1	27.9
Other crops .....	70.1	79.7	90.6	83.2	90.0
Total area of crops .....	2 771.6	2 773.2	2 864.8	2 856.2	3 107.9

## IRRIGATED CULTURE

The following table shows the area of all irrigated culture in South Australia for the seasons 1974-75 to 1983-84. Of the areas shown below, about 55 per cent of both orchards and vineyards and about 15 per cent of pastures are in the River Murray irrigation areas listed in the table on page 369.

Area Under Irrigated Culture, South Australia <sup>(a)</sup>

Season	Orchards	Vineyards	Vegetables	Other Crops	Pasture	Total
Hectares						
1974-75 .....	13 263	17 987	5 888	2 396	39 414	78 948
1975-76 .....	13 132	18 387	5 601	2 205	38 569	77 894
1978-79 .....	12 338	18 892	6 409	4 571	36 176	78 386
1980-81 .....	12 627	20 253	5 676	2 028	38 890	79 474
1983-84 .....	12 807	16 512	6 413	4 644	46 578	86 954

(a) Irrigation details collected on an irregular basis.

The most important irrigation areas are those located in the Murray Valley. A description of the development and types of irrigation schemes along the River Murray is given in Part 8.2.



**River Murray Irrigation Areas: Area of Pasture, and Area and Production of Vineyards and Orchards, 1983-84 <sup>(a)</sup>**

Irrigation Area	Area			Production			
	Pasture (b)	Vineyards		Orchards	Vineyards		Orchards
		Bearing	Not Bearing		Total Grapes Produced	Grapes used for Wine	Oranges Peaches
		Hectares			Tonnes		
Upper Murray:							
Berri .....	49.7	1 813	76	1 030	30 745	25 148	10 016 893
Cadell .....	—	84	4	182	1 087	775	1 305 55
Cobdogla .....	4.0	546	8	7	11 314	9 949	109 —
Cooltong .....	17.0	169	3	272	3 199	3 028	5 620 25
Holder .....	—	126	8	119	2 755	2 669	1 643 12
Loveday .....	43.0	784	29	122	16 285	14 191	1 811 —
Loxton .....	44.0	1 360	44	1 075	27 596	25 200	27 347 173
Moorook .....	375.2	163	8	175	2 026	1 583	2 098 9
Nookamka .....	8.6	603	19	65	13 228	11 100	555 6
Ral Ral .....	110.7	257	13	133	3 805	2 878	357 298
Renmark .....	268.4	1 842	167	1 533	26 819	21 701	13 622 3 114
Sunlands .....	—	49	1	499	958	958	14 505 —
Waikerie .....	0.2	508	38	951	9 212	8 791	14 350 351
Other .....	13.0	298	13	884	5 305	4 449	16 804 280
Total Upper Murray ...	933.8	8 602	431	7 047	154 334	132 420	110 142 5 216
Lower Murray:							
Cowirra .....	412.0	—	—	—	—	—	— —
Jervois .....	3 115.0	—	—	4	—	—	— —
Monteith .....	607.8	—	—	6	—	—	— —
Mypolonga .....	1 470.3	—	—	448	—	—	5 052 128
Neeta .....	312.0	—	—	—	—	—	— —
Pompoota .....	473.1	—	—	—	—	—	— —
Other .....	832.1	1	1	2	—	—	— —
Total Lower Murray ...	7 222.3	1	1	460	—	—	5 052 128
Total .....	8 156.1	8 603	432	7 507	154 334	132 420	115 194 5 344

(a) Excludes areas and yields of crops grown by irrigation on the River Murray and elsewhere not in the above irrigation areas.

(b) Includes non-irrigated pastures.

The main crops in the Upper Murray irrigation areas are grapes, citrus fruit and stone fruit while the reclaimed swamp areas of the Lower Murray irrigation areas are used mainly for pastures.

## FERTILISERS

Nearly all soils in the agricultural areas of South Australia are deficient in phosphorus, and superphosphate is used on both crops and pastures in large quantities to overcome this deficiency. In some areas trace elements (manganese, copper, zinc and molybdenum) are added to the superphosphate to rectify the chronic shortage of these elements.

## Principal Crops and Pasture Fertilised, South Australia, 1983

Type of Crop	Area Fertilised	Fertiliser Used			
		Super-phosphate	Other	Total	Per Hectare
	'000 hectares		Tonnes		kg
Wheat .....	1 415	150 625	19 295	169 920	120.08
Pasture .....	1 631	191 852	10 351	202 203	123.97
All other crops (a) .....	n.a.	151 353	39 875	191 228	n.a.
Total .....	n.a.	493 829	69 521	563 351	n.a.

(a) Includes other cereals (barley, oats, rye), vegetables, fruit trees and vines and unspecified crops.

## Use of Artificial Fertilisers: Statistical Divisions, South Australia, 1983

Statistical Division	Wheat			Pastures	
	Area Fertilised	Proportion of Area Sown for Wheat	Fertiliser Used	Area Fertilised	Fertiliser Used
	'000 ha	Per cent	Tonnes	'000 ha	Tonnes
Adelaide .....	2	86.5	294	10	1 529
Outer Adelaide .....	35	84.2	4 973	276	39 962
Yorke and Lower North .....	229	89.6	30 519	129	14 109
Murray Lands .....	253	88.8	25 353	192	24 403
South East .....	39	83.7	5 399	835	102 798
Eyre .....	697	90.9	86 485	150	15 096
Northern .....	160	90.0	16 897	39	4 305
Total .....	1 415	89.8	169 920	1 631	202 202

## Use of Artificial Fertilisers, South Australia

Year	Wheat			Pastures	
	Area Fertilised	Proportion of Area Sown for Wheat	Fertiliser Used	Area Fertilised	Fertiliser Used
	'000 ha	Per cent	Tonnes	'000 ha	Tonnes
1979 .....	1 325	92.5	170 208	1 811	239 011
1980 .....	1 378	94.7	179 932	1 894	242 967
1981 .....	1 388	96.5	176 283	1 782	222 588
1982 .....	1 318	92.1	168 268	1 610	194 092
1983 .....	1 415	89.8	169 920	1 631	202 202

## CEREALS

## WHEAT

Wheat has always been a crop of major importance to the economy of this State. South Australia provided 13.1 per cent of the Australian wheat production in 1983-84.

In the past twenty years a feature of the industry has been that average yields have fluctuated about a higher level of average yield mainly because of improved farming practices, including the adoption of nitrogen-building legumes in the rotation. The average yield per hectare for the 1983-84 season was a record 1.66 tonnes, surpassing the previous high of 1.65 tonnes in 1979-80. Production of wheat in 1983-84 was a record 2 843 002 tonnes, while the previous high of 2 349 000 tonnes was set in 1979-80.

## Wheatgrowing Districts

Wheatgrowing in South Australia is virtually restricted to the belt between the 200 millimetre and 450 millimetre rainfall isohyets for the period April-November inclusive.

The principal wheat producing districts are in the Eyre, Yorke and Lower North, Murray Lands and Northern Statistical Divisions. These districts accounted for about 94 per cent of the area sown in 1983-84.

**Wheat Sown for Grain: Area and Production, Statistical Divisions, South Australia**

Statistical Division	Area		Production	
	1982-83	1983-84	1982-83	1983-84
	'000 hectares		Tonnes	
Adelaide .....	1	2	1 358	4 232
Outer Adelaide .....	36	39	26 162	89 866
Yorke and Lower North .....	227	252	206 199	563 543
Murray Lands .....	242	283	59 794	430 991
South East .....	44	46	39 412	112 423
Eyre .....	704	766	293 285	1 322 473
Northern .....	144	176	66 154	319 474
Total .....	1 398	1 564	692 364	2 843 002

**Varieties of Wheat**

In each of the Australian States a committee has been set up to examine and recommend the wheat varieties which should be grown by farmers for marketing through the Australian Wheat Board. The South Australian Advisory Committee on Wheat Quality was established in 1962. Recommendation or approval of wheat varieties is decided each year by the Committee which brings together relevant available information on breeding, testing, commercial production, handling and end usage of wheat and more particularly of specific varieties. The Department of Agriculture and the Australian Wheat Board encourage growers to produce wheat with uniform characteristics in both the Hard class and Australian Standard White (ASW) class and this can be done more successfully if only a few of the best varieties are grown by the farmers.

The Advisory Committee has divided the State into eight wheat growing zones and each year recommends to farmers those wheat varieties which are likely to give the best results as far as the protein content and rate of yield are concerned.

**Marketing**

*Australian Wheat Board*

The Board has legislative powers over the receipt and disposal of all wheat and wheat products. Under the stabilisation plan the Board is the sole authority for marketing wheat in Australia and for marketing wheat and flour for export.

In its first full season, 1939-40, the Wheat Board received 5.3 million tonnes. Deliveries to the Board in 1983-84 totalled 21.1 million tonnes.

The deliveries (as distinct from the production) of wheat to the Australian Wheat Board in South Australia for season 1983-84 represented 12.9 per cent of the record total Australian deliveries.

South Australian deliveries were 483 000 tonnes or 21.6 per cent above the previous best in 1979-80 when 2 232 000 tonnes were received by the Board.

Although the 1983-84 season was a State record for wheat deliveries, a feature was the unexpected large quantity of 1.25 million tonnes (or 46 per cent of the State) received by the Board on Eyre Peninsula.

Season 1983-84 was the last of five seasons under the *Wheat Marketing Act 1979*. The *Wheat Marketing Act 1984* will take over for the five seasons commencing 1984-85.

During the 12 months ended 30 September 1984, total exports of wheat (including wheat equivalent of flour and wheat products) were 14.2 million tonnes.

#### Deliveries to the Australian Wheat Board

Season	South Australia	Australia	Season	South Australia	Australia
	'000 tonnes			'000 tonnes	
1974-75 .....	1 377	10 705	1979-80 .....	2 232	15 328
1975-76 .....	1 041	11 258	1980-81 .....	1 533	10 059
1976-77 .....	725	10 983	1981-82 .....	1 581	15 545
1977-78 .....	417	8 540	1982-83 .....	588	7 927
1978-79 .....	1 976	17 457	1983-84 .....	2 715	21 059

#### Bulk Handling

South Australian Co-operative Bulk Handling Ltd (SACBH), is the sole bulk grain handling authority in this State, and is owned, financed and controlled by the growers.

The bulk handling operations of the State have been divided into seven divisions—Ardrossan, Port Giles, Wallaroo, Thevenard, Port Lincoln, Port Pirie and Port Adelaide—each of which provides a terminal port as a shipping outlet for the country silos within the division. The following table shows the total bulk capacity, expressed in tonnes of wheat, of the respective divisions.

#### Bulk Handling Capacity, South Australia, 31 December 1984 <sup>(a)</sup>

Division	Total Permanent Storage Tonnes
Ardrossan .....	283 400
Port Adelaide .....	1 245 300
Port Giles .....	164 100
Port Lincoln .....	1 033 300
Port Pirie .....	555 200
Thevenard .....	481 630
Wallaroo .....	441 400
Total .....	4 204 330

(a) Includes current contracts let.

The system by which payments are made to growers requires each grower to forward a Claim for Payment prior to the commencement of harvest advising all payee details. The form enables the prompt payment of the first advance, known as the Guaranteed Minimum Price (GMP), on a weekly basis throughout the harvest period, by directly crediting the net payments to growers individual bank accounts.

Effective from the beginning of the 1978-79 season, the Bulk Handling Authority nominates a rate per tonne at the commencement of each season, to meet the costs incurred in the handling, storage and shipment of wheat through the silo system. The Board pays the charge to the Co-operative and recovers the costs from those growers who deliver wheat for that season to South Australian silos.

The GMP for season 1983-84 was \$150 per tonne less charges such as SACBH storage

and handling, research levies, refinancing fund and tolls. The SACBH storage and handling charge for season 1983-84 was \$12.43 per tonne.

### Grading of Wheat

To aid the Wheat Board in the marketing of wheat each season, a separate standard sample is determined for the various classes of exportable wheat produced in each State. Samples of the various classes of wheat are then packed in sealed bags and forwarded by the Wheat Board to the potential purchasers of Australian wheat.

In South Australia, the classes of wheat for which official standards are declared each season are Australian Hard (SA) Wheat and Australian Standard White (SA) Wheat. An official standard sample will also be determined for the class known as General Purpose in seasons when sufficient is available for export.

The segregation of South Australian wheat into classes was first introduced in the 1957-58 season when wheat was separated into a Semi-hard wheat class (after 1966 called Hard wheat) and into what, up to that time, was the long established FAQ (Fair Average Quality) class. This has been done in each season since 1957-58.

Test weights of the standard samples for the three classes of wheat segregated in season 1983-84 were declared as follows:

Class of Wheat	Kilograms per Hectolitre
ASW .....	80.0
Hard .....	79.0
General Purpose .....	75.0

### Prices

The following table shows the trend in export and domestic prices of Australian wheat for the years 1979-80 to 1983-84. The export prices shown in the table are the basic selling prices for ASW bulk wheat f.o.b., terminal ports. The average quoted price for export has been in US Dollars from 12 December 1983.

**Export and Domestic Prices of Australian Wheat**

Year	Export Price per Tonne (a)	Home Price per Tonne
	\$	\$
1979-80 .....	153.19	130.78
1980-81 .....	151.58	156.12
1981-82 (b) .....	152.50	187.20
1982-83 .....	179.92	203.46
1983-84 .....	152.50	219.41

(a) Based on the average of the daily quoted price, year ended November to 1980-81, and year ended September from 1981-82.

(b) The 1981-82 figures apply to the ten months ended 30 September 1982.

## BARLEY

### Production

In 1983-84 the area sown to barley for grain in South Australia represented 35.5 per cent of the Australian total, and the production was 37.2 per cent of the total grain produced. Of the area sown for grain, 98 per cent was two-row barley reflecting the suitability of certain areas of the State for its production. Much of the barley is used for malting, but this is declining due to the increased planting of higher-yielding feed grain

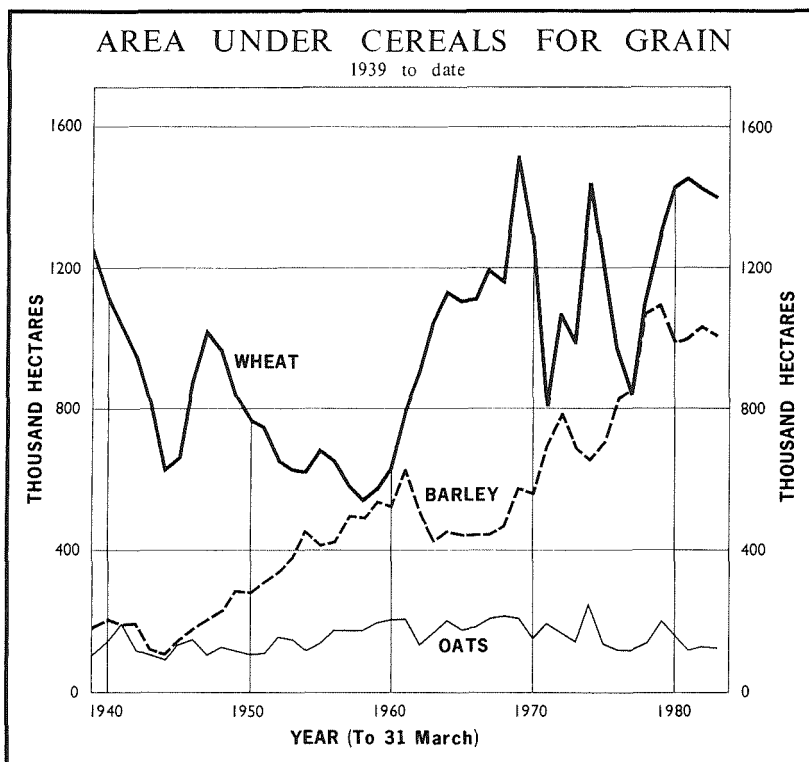
types. The ideal malting barley has a dry, plump undamaged grain with a thin skin; it should be starchy but with a rather low protein content. Production of this type requires an area of dependable and moderate rainfall, and with a ripening period somewhat prolonged by cool conditions without high temperature or drying winds.

Total area sown to barley in 1983-84 was 1 117 984 hectares, 1 103 848 hectares being sown for grain. Production in 1983-84 was 1 816 872 tonnes, an increase of 172 per cent on the previous drought year and a new record.

A record yield of 1.65 tonnes per hectare was achieved in 1983-84 surpassing the previous record of 1.62 tonnes per hectare in 1974-75.

Yorke Peninsula is the major barley-producing district in South Australia. In the 1983-84 season this area contributed approximately 43.0 per cent of the total crop. It has an ideal climate for barley growing as the moisture-laden breezes off the gulfs on either side retard ripening.

The following graph illustrates variations in areas sown to the major cereal crops in South Australia since 1937.



**Area and Production of Barley for Grain: Statistical Divisions, South Australia**

Statistical Division	Area		Production	
	1982-83	1983-84	1982-83	1983-84
	'000 hectares		'000 tonnes	
Adelaide .....	3	4	3	6
Outer Adelaide .....	55	61	39	121
Yorke and Lower North .....	352	378	308	781
Murray Lands .....	226	252	96	292
South East .....	39	46	35	61
Eyre .....	264	279	151	405
Northern .....	66	85	35	151
Total .....	1 005	1 104	668	1 817

**Varieties**

A number of new barley varieties have been released to farmers in recent years. Several of these are feed grain types and, as the table shows, the expanded sowings of these varieties are mainly at the expense of Clipper and Weeah, which have been the main malting varieties for a number of years.

**Percentage of Area Planted to each Variety, South Australia**

Variety	Type	1980-81	1981-82	1982-83	1983-84	1984-85
Clipper	Malting	62.0	60.4	45.5	31.0	18.5
Weeah	Malting	19.0	21.9	23.4	22.3	11.8
Dampier	Feed	12.5	12.0	10.7	7.7	2.8
Galleon	Feed	—	0.4	15.3	29.2	38.5
Forrest	Feed	—	—	0.5	7.7	22.2
Other	Feed	6.5	5.3	4.6	2.1	2.6

Source: Australian Barley Board

The recent release of the new malting variety, Schooner, is expected to result in a slowing of the trend toward planting greater areas of feed-type barleys.

**Marketing**

The marketing of barley is under the control of the Australian Barley Board which operates in South Australia and Victoria and provides an orderly marketing system for barley grown in these States. In the 1983-84 season the Board received a total of 2 474 000 tonnes. The barley is received in bulk, but in recent years considerable amounts have been bagged after sale to meet the requirements of the Middle East markets.

For marketing purposes all barley is classified on sample at time of delivery. Classification is firstly by variety, and secondly by quality. The Board numbers its barley standards for South Australia.

Two Row No. 1 and No. 2 grades are used mainly for malting, while the Two Row No. 3 and No. 4 grades are the feed grades.

## Australian Barley Board Receivals, South Australia

Season	Two Row				Total
	No. 1 Grade	No. 2 Grade	No. 3 Grade	No. 4 Grade	
	'000 tonnes				
1981-82 .....	64	260	781	15	1 120
1982-83 .....	25	83	379	8	495
1983-84 .....	214	328	1 185	45	1 772

The price of malting barley is determined on the basis of an agreed formula in consultation with the malting and brewing industry. The prices for feed purposes are determined monthly. The home consumption prices determined by the Board for barley for the seasons 1981-82 to 1983-84 are shown below.

## Price per Tonne of Barley for Home Consumption

Season	No. 1 Grade	No. 2 Grade	No. 3 Grade	No. 4 Grade
Bagged Barley				
	Dollars			
1981-82:				
3 year contract .....	—	—	134·90	133·00
Other .....	190·20	184·20	142·00	140·00
1982-83:				
High .....	206·46	200·46	182·25	180·25
Low .....	206·46	200·46	158·00	156·00
1983-84:				
High .....	198·00	192·00	158·00	156·00
Low .....	198·00	192·00	150·00	148·00

## OATS

The milling qualities of most oats grown in South Australia do not meet the requirements of overseas markets and only a small proportion of the harvest is exported; most of the crop is used as animal fodder. As is the case with barley, some of the area sown for grain and hay is grazed until June or July then closed to sheep to allow re-growth to a crop. Part of the area sown for forage is left to stand until it is used as dry grazing in autumn, when other fodder is not plentiful.

## Oats, South Australia

Season	Area			Total Area	Production	
	Grain	Hay	Forage		Grain	Hay
	'000 hectares				'000 tonnes	
1981-82 .....	127	43	33	202	98	97
1982-83 .....	124	41	40	205	65	68
1983-84 .....	153	51	23	228	180	186



### RYE

Rye is a minor crop, but it has been used to control sand drift and particularly to stabilise the light soils of the Murray Mallee. Because the sands are deficient in two main nutrients (nitrogen and phosphorus), a mixed superphosphate-ammonia fertiliser is sown with the rye seed early in the season. The rapid early growth of the rye while the ground is still warm and before the strong winds of winter cause sandblast, is at present the most effective form of controlling drifting sand. Rye provides early greenfeed while some grain is produced on a number of farms. Although most grain is used for stock feed, varying quantities are exported in different years for milling. Rye hay is of poor nutritional quality and only a few hundred tonnes are produced each year.

In 1983-84, 35 000 hectares of rye for grain yielded 13 600 tonnes. The record production, set in 1978-79, is 17 000 tonnes from 38 000 hectares.

### HAY

The quantity of hay produced varies considerably from year to year according to seasonal conditions and the need to replace stocks used during the previous season. The main crops cut for hay in recent years have been oats, lucerne, clover and grass hay.

**Hay: Area and Production, South Australia**

Season	Oaten	Wheaten	Pure Lucerne	Barley and Rye	Other Pasture Hay (a)	Total
AREA ('000 hectares)						
1981-82 .....	43	10	14	8	119	194
1982-83 .....	41	16	13	10	71	151
1983-84 .....	51	11	16	8	173	259
PRODUCTION ('000 tonnes)						
1981-82 .....	97	23	57	15	279	471
1982-83 .....	68	30	67	14	171	350
1983-84 .....	186	32	75	18	511	822

(a) Includes lucerne based pasture.

Between 20 000 and 50 000 tonnes of silage are produced in most years and in certain areas this is an important supplementary stock food; in 1983-84 production was 28 000 tonnes.

### PASTURES

The Murray Mallee and Eyre Peninsula have been transformed from unstable farming districts to highly productive areas through the sowing of more and improved pastures. In earlier years most pasture plants available flourished only in the higher rainfall zones of the State. At that time Mount Barker subterranean clover was the predominant pasture. New varieties have been introduced, including Clare, Geraldton, Dwalganup and Yarloop subterranean clovers. These are suited to the hard setting soils of the important wheatgrowing area extending northward from Adelaide to Jamestown.

Another type of legume, known as medics, has been found to be suitable for the drier cereal country, especially the mallee soils. Five medics are grown: Hannaford, Jemalong Barrel, Harbinger Strand, Gama Paragosa and Snail. Lucerne is also extensively grown; it thrives under irrigation yet still grows in areas with as little as 250 millimetres of rainfall a year—it is both salt-resistant and drought-resistant. Strawberry clover is the important legume on the black soils of the South East.

The most important perennial grasses in the better rainfall areas are *Phalaris tuberosa*, perennial rye grass and cocksfoot while the annual, wimmera rye grass is most widely

used in the medium to low rainfall areas. The naturalised annual grasses which occur over the whole of the State contribute substantially to total pasture production.

There has been a significant increase in the area of sown pastures over the past twenty years. Area under pasture for the years 1979-80 to 1983-84 is shown for statistical divisions in the table below.

**Area Under Pasture: Statistical Divisions, South Australia <sup>(a)</sup>**

Statistical Division	1979-80	1980-81	1981-82	1982-83	1983-84
'000 hectares					
Adelaide .....	14	14	14	12	13
Outer Adelaide .....	358	357	378	365	378
Yorke and Lower North .....	241	229	291	268	275
Murray Lands .....	695	663	807	772	781
South East .....	1 205	1 241	1 296	1 279	1 281
Eyre .....	614	597	745	668	696
Northern .....	84	85	113	90	103
Total .....	3 211	3 187	3 643	3 455	3 527

(a) Lucerne, clovers (all kinds), rye grasses (all kinds), cocksfoot, paspalum, phalaris, primrose, sudan and veldt.

### PASTURE SEEDS

Sown pastures form the basis for efficient farming in the cereal and high rainfall zones of the State. Legumes (clovers and medics) maintain or increase soil fertility by harbouring rhizobial bacteria which convert nitrogen from the atmosphere. Legumes generally have high nutritive value as livestock feed, and by decaying, or returned as manure, increase soil nitrogen which can be utilised by cereals or other pasture grasses. The seed industry has pioneered many overseas markets for legumes. While many crops are grown each year the industry quickly adapts to fill special demands; this accounts for some of the fluctuations shown in the table below. Lucerne is the most important perennial legume in South Australia and growers in this State supplied approximately 64 per cent of national production in 1983-84.

**Pasture and Grasses Harvested for Seed: Area and Production, South Australia**

Crop	Area			Production		
	1981-82	1982-83	1983-84	1981-82	1982-83	1983-84
	Hectares			Tonnes		
Lucerne .....	9 359	4 841	7 370	1 690	713	1 203
Clovers:						
Rose, Shaftal .....	231	609	971	50	181	204
Strawberry .....	565	166	215	64	31	36
Subterranean .....	4 056	3 028	5 676	1 341	920	2 312
Cocksfoot .....	236	153	188	77	58	59
Fescue .....	260	56	157	94	22	47
Medics:						
Barrel .....	1 568	1 391	4 786	278	95	1 614
Harbinger .....	286	379	500	84	27	145
Snail .....	669	465	1 016	185	90	398
Other (a) .....	944	1 086	1 098	213	143	403
Phalaris tuberosa .....	833	843	956	213	200	234
Other n.e.i. ....	740	672	1 782	198	81	179
Total .....	19 747	13 689	24 715	4 482	2 560	6 834

(a) Area and production of Gama Medic (notably the Paraponto and Sapo cultivars) increased significantly in 1981-82.

## OILSEEDS

In recent years there has been a significant increase in the area sown to oilseeds. These have proved an alternative to wheat, wool and meat production and are mainly grown under contract to processors and stockfeed manufacturers. The seed is crushed to yield oils which have domestic and industrial applications and the high protein meal by-product is used for the manufacture of stockfeeds. Details of area and production of selected oilseeds since 1979-80 are shown in the following table.

Selected Oilseed Crops: Area and Production, South Australia

Season	Linseed	Rapeseed	Safflower	Sunflower
AREA (Hectares)				
1979-80 .....	1 338	12 213	580	7 841
1980-81 .....	1 154	10 000	1 090	5 952
1981-82 .....	1 059	7 477	1 211	4 914
1982-83 .....	1 100	3 513	852	1 096
1983-84 .....	754	3 373	1 159	2 679
PRODUCTION (Tonnes)				
1979-80 .....	1 915	15 599	487	8 540
1980-81 .....	1 414	9 299	945	5 817
1981-82 .....	1 177	7 932	1 061	4 281
1982-83 .....	745	3 147	593	749
1983-84 .....	1 060	4 122	1 291	2 883

## VEGETABLES

The market garden industry in South Australia is characterised by a large number of growers, most of whom cultivate only a few hectares. Many of the gardens form part of a larger holding. Much of the production of the industry comes from properties with easy access to the Adelaide market.

Of the total area of approximately 8 000 hectares devoted to market gardens, districts adjacent to Adelaide account for 4 500 hectares producing all types of vegetables, including large quantities of celery and early tomatoes for export. Over 1 400 hectares are cultivated in the South East Division, with approximately 1 000 hectares being potatoes. An area of some 80 hectares in Northern Division (mainly on the coastal plains near Port Pirie) is used for the production of peas, potatoes and early tomatoes for Adelaide and for export to the Melbourne market. Approximately 2 000 hectares along the River Murray are devoted to production of potatoes, pumpkins and melons for the Adelaide market, tomatoes for local markets and small areas of most other vegetables.

The bulk of the potato production comes from the central and southern Adelaide Hills and from the Mount Gambier area. The average yield has risen progressively because of better quality seed, improved fertilisers and advances in pest and disease control. The 1983-84 average yield was 29.1 tonnes per hectare.

The Adelaide plains produce most of the South Australian tomatoes which are grown in glasshouses. Significant quantities, mostly for canning and juice production in local factories, are now grown in the Upper Murray irrigation areas. In recent years, high yields have resulted from the introduction of new varieties.

## Vegetables for Human Consumption, South Australia

Vegetable	Area		Production	
	1982-83	1983-84	1982-83	1983-84
	Hectares		Tonnes	
Brussels sprouts .....	90	98	1 970	2 684
Cabbages .....	241	229	7 754	7 784
Carrots .....	394	506	11 124	14 182
Cauliflowers .....	251	252	9 890	8 930
Celery .....	81	92	5 328	5 808
Cucumbers .....	50	56	2 179	2 420
Lettuce .....	267	272	3 912	4 077
Onions .....	1 227	1 002	37 440	34 320
Peas .....	56	55	146	185
Potatoes .....	3 798	4 154	95 530	120 748
Pumpkins .....	405	520	5 969	8 354
Sweet corn .....	75	68	609	795
Tomatoes .....	324	293	9 354	9 945
Turnips .....	35	21	687	464
Other .....	320	413	..	..
Total .....	7 614	8 029	..	..

## GRAPES

Approximately 45 per cent of Australia's vineyard area is located in South Australia where the bulk of the grapes are used for winemaking. In 1983-84 South Australia produced 234 million litres of wine and 5 115 tonnes of dried vine fruit representing 59.2 per cent and 6.3 per cent respectively of total Australian production. The following table shows the area and production of vineyards in South Australia for the seasons 1979-80 to 1983-84.

## Area and Production of Vineyards, South Australia

Season	Vines		Production of Grapes for		
	Bearing	Not yet Bearing	Wine	Table	Drying
	Hectares		Tonnes		
1979-80 .....	28 509	2 225	308 475	2 690	14 744
1980-81 .....	28 109	2 308	284 181	2 545	10 395
1981-82 .....	28 024	2 300	328 747	2 668	21 794
1982-83 .....	26 927	2 179	254 439	2 819	14 800
1983-84 .....	25 876	1 988	287 647	2 970	20 533

The area planted to vines at harvest 1984 was 27 863 hectares, 3 680 hectares below the record area of 31 543 hectares at 31 March 1978. Total production in 1983-84 was 311 149 tonnes, 42 061 tonnes below the record production of 353 210 tonnes in 1981-82.

Grubbings in 1983-84 totalled 825 hectares, 309 hectares less than the 1978-79 record of 1 134 hectares.

About one-third of the State's wine-grape crop is received by the co-operative

wineries. Nearly all of this is grown by members who receive a down payment on each tonne, followed by further payments over a period of up to five years according to realisation made on the product. The balance of the crop is processed by proprietary wineries which purchase grapes from the growers. Minimum prices, according to variety, are determined by a committee chaired by the Prices Commissioner. The proprietary wineries also purchase a large proportion of the wine, brandy and spirits made by co-operatives.

The following table shows the area, production and utilisation of grapes for the seasons 1979-80 to 1983-84.

**Area, Production and Utilisation of Grapes, South Australia**

Season	Area of Vines	Total Grape Production (Fresh)	Wine Production (a)	Dried Fruit Production		
				Currants	Sultanas	Raisins
	Hectares	Tonnes	'000 litres		Tonnes	
1979-80 .....	30 734	325 909	234 323	2 030	1 730	295
1980-81 .....	30 418	297 121	220 384	1 145	1 449	185
1981-82 .....	30 324	353 210	268 685	2 360	2 852	363
1982-83 .....	29 106	272 058	200 283	1 408	2 161	174
1983-84 .....	27 863	311 149	234 499	1 667	3 328	119

(a) Excludes grape spirit added.

### Grape Growing Districts

The grape growing districts of South Australia are subject to substantial variety in geographical location, climatic variations and soil conditions and can be divided into six easily recognisable regions ranging from the Clare-Watervale district in the north to the southern limit of the grape growing area at Coonawarra in the south-east of the State and bounded by the irrigated areas of the River Murray to the east.

Supplementary irrigation is carried out in some grape growing districts which have not been officially designated as irrigation areas, especially Langhorne Creek and Coonawarra where approximately 50 to 60 per cent of all vines are under irrigation. The other areas are mainly dependent on winter rainfall stored in the sub-soil by careful dry-farming methods, to be used during the summer growing season of the vine—the yields in the non-irrigated districts are more variable than the Upper Murray irrigation areas.

District average yields in the irrigated areas are 15 to 18 tonnes per hectare although individual vineyards have yielded 35 to 40 tonnes. In the non-irrigated districts the average is 4 to 8 tonnes per hectare with individual vineyards producing 20 to 25 tonnes per hectare in favourable years.

### Grape Varieties

There has been a sustained interest in the premium wine varieties, with significant new plantings of Cabernet Sauvignon, Rhine Riesling, Chardonnay and Pinot Noir. This has been at the expense of the bulk wine varieties, large areas of Grenache and Shiraz having been grubbed.

## Principal Varieties of Vine, South Australia

Variety	March 1981	March 1982	March 1983	March 1984
	Hectares			
Cabernet Sauvignon .....	2 264	2 342	2 201	2 220
Chardonnay .....	314	478	650	818
Crouchen (a) .....	938	959	952	895
Doradillo .....	1 462	1 371	1 210	1 097
Grenache .....	4 149	3 858	3 435	3 075
Mataro .....	1 203	1 071	960	841
Muscat Gordo Blanco .....	2 243	2 283	2 217	2 126
Palomino and Pedro Ximenez .....	2 182	2 118	1 983	1 835
Rhine Riesling .....	3 445	3 681	3 797	3 679
Shiraz .....	4 842	4 631	4 170	3 819
Sultana .....	2 548	2 564	2 493	2 402
Traminer .....	314	338	366	361
Other .....	4 514	4 630	4 672	4 695
Total .....	30 418	30 324	29 106	27 863

(a) Previously called Clare Riesling.

## ORCHARD FRUIT

A wide variety of fruit crops is grown in South Australia. The main types are oranges, peaches and apricots (predominantly grown in the irrigation settlements of the Riverland) and apples (nearly all grown in the Adelaide Hills).

The following table showing citrus trees of bearing age and production during the past five seasons shows the predominance of navel and valencia oranges.

## Citrus Fruit: Trees and Production, South Australia

Season	Oranges			Lemons and Limes	Mandarins	Grape- fruit	Total
	Navel	Valencia	Other				
TREES OF BEARING AGE ('000)							
1979-80 .....	502	818	7	116	(a)	(a)	n.a.
1980-81 .....	488	887	8	121	67	77	1 649
1981-82 .....	485	855	6	120	72	80	(b) 1 618
1982-83 .....	468	850	5	115	68	81	(b) 1 587
1983-84 .....	472	911	4	112	70	80	(b) 1 651
PRODUCTION (Tonnes)							
1979-80 .....	55 879	98 558	697	10 128	(a)	(a)	n.a.
1980-81 .....	61 406	92 899	704	14 727	6 347	10 022	186 106
1981-82 .....	50 426	91 951	409	10 957	4 066	10 860	168 670
1982-83 .....	53 666	92 822	367	10 943	4 632	10 517	172 947
1983-84 .....	48 977	97 702	357	7 226	5 192	11 264	170 718

(a) Data not collected for mandarins and grapefruit. (b) 'Other citrus' included in total number of trees.

Citrus growing is concentrated in the irrigation settlements of the Riverland where approximately 95 per cent of the total crop is produced. The industry has shown great expansion in the last decade; in 1980-81 a record production of 186 106 tonnes was achieved. Total production in 1983-84 was 170 718 tonnes.

Apple growing is the principal non-citrus fruit industry and is concentrated in the Adelaide Hills. A record production of 33 000 tonnes was achieved in 1940-41, while production in 1983-84 was 19 119 tonnes.

Pears are grown in the Adelaide Hills, in the Barossa Valley and on the Murray irrigation settlements. The yield from the 1970-71 harvest was a record 13 000 tonnes from 636 hectares. Production has increased to 6 695 tonnes in 1983-84, the first increase for five years.

The stone fruits industry became important following development of the irrigation schemes. Production of peaches has shown the greatest increase: the 1951-52 yield of 3 000 tonnes from 835 hectares was typical for the crop until that time, but by 1966-67 the yield was a record 29 000 tonnes from 1 924 hectares. In the same period production of apricots rose from 11 000 to 28 000 tonnes. South Australia is the major apricot-producing State, with the greater part of the crop being dried and much of the remainder being canned.

A large proportion of Australia's almonds are produced in South Australia, mainly in the Willunga and Riverland areas. In 1980-81 a record crop of 2 397 tonnes was produced from 528 000 trees of bearing age. In 1983-84 a total number of 502 000 trees of bearing age produced 992 tonnes. It should be noted that production from 1981-82 is collected in kernel weight rather than the shell weight of previous years.

Cherries, plums and prunes, and strawberries are the most important of the remaining crops.

#### Non-citrus Orchard Fruit: Trees and Production, South Australia

Season	Apples	Apricots	Cherries	Peaches	Pears	Plums and Prunes
TREES OF BEARING AGE ('000)						
1979-80 .....	433	316	38	229	112	<i>n.a.</i>
1980-81 .....	437	311	38	222	104	55
1981-82 .....	441	312	37	207	99	55
1982-83 .....	408	292	36	166	89	59
1983-84 .....	380	298	37	141	90	60
PRODUCTION (Tonnes)						
1979-80 .....	17 420	14 701	485	14 132	7 111	<i>n.a.</i>
1980-81 .....	18 460	17 022	625	14 434	6 872	1 688
1981-82 .....	18 260	16 639	449	9 374	5 941	1 006
1982-83 .....	18 027	16 298	626	8 565	5 613	1 494
1983-84 .....	19 119	14 195	549	6 618	6 695	1 636

The Upper Murray irrigation areas and the Barossa Valley of South Australia account for almost the entire Australian production of dried apricots, peaches, pears and nectarines. A small proportion of the Australian production of dried prunes is produced in the Barossa Valley and in the Noarlunga district.

## OTHER CROPS

Other crops cultivated in South Australia include field peas, canary seed, triticale, lupins, vegetable seeds and coriander.

In 1983-84, 43 748 hectares of field peas were grown for grain yielding 68 216 tonnes; virtually all of this area is located in the cereal growing districts north of Adelaide. Field peas are grown mainly as a livestock fodder or for processing into split peas.

Lupin grain is used mainly in stock feed, as a protein source for poultry and pigs and also to some extent as a protein supplement for ruminants. In 1983-84, 24 773 tonnes of lupins were grown for grain from 21 287 hectares—approximately 88 per cent being produced in the Murray Lands and South East.

A considerable portion of the area devoted to nurseries is found in the vicinity of Adelaide. In addition there are several fruit tree nurseries in the horticultural districts of the River Murray.

Establishments which undertake propagation, cultivation or growing-on of nursery produce for sale provide information about their operations triennially. Latest figures (for the 1983-84 season) show that the area used for nurseries (including flower growing) and cultivated turf production has increased from 198 hectares in 1977-78 to 333 hectares.

## VALUE OF AGRICULTURAL PRODUCTION

The value of agricultural production may be expressed in terms of gross value and local value. Gross value is defined as the value placed on recorded production at wholesale prices realised in principal markets. Where products are absorbed at a local point or become raw material for a secondary industry the value in each case is presumed to be the value of the principal market. Local value equals the gross value of production less marketing costs.

## VALUE AND PRICES OF CROPS

The gross value of crops (including pastures) for South Australia in the 1983-84 season was estimated at \$1 120 376 000.

In the following table gross values of principal crops for the seasons 1978-79 to 1983-84 are shown.

Gross Value of Principal Crops, South Australia

Commodity	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84 <sup>p</sup>
\$'000						
Cereals:						
Wheat .....	265 159	357 058	253 599	269 453	120 849	466 138
Barley .....	118 303	192 758	165 418	168 727	98 132	273 466
Oats .....	9 976	11 455	14 039	11 687	9 571	21 536
Rye .....	1 220	484	949	1 501	1 075	1 794
Crops for hay .....	6 969	4 501	6 423	13 038	15 483	16 487
Lupins for grain .....	1 106	1 988	2 964	2 508	1 612	3 810
Rapeseed .....	2 765	3 185	2 352	1 700	727	1 113
Sunflower .....	2 316	1 786	1 490	1 014	200	912
Field peas .....	4 479	5 506	7 513	7 919	5 798	11 605
Orchard and berry fruit:						
Citrus .....	30 470	31 935	33 693	35 889	33 536	38 613
Apples .....	9 729	8 050	12 426	13 029	12 335	14 063
Apricots .....	8 864	8 904	11 207	13 643	13 104	12 498



## Gross Value of Principal Crops, South Australia (continued)

Commodity	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84 <sub>p</sub>
\$'000						
Orchard and berry fruit (continued):						
Peaches .....	4 484	4 536	4 177	3 679	2 597	2 476
Other .....	9 988	10 933	11 614	11 245	13 095	14 915
Vine fruit:						
Wine grapes .....	40 923	48 890	50 235	62 225	52 175	65 768
Table grapes .....	1 601	2 176	2 323	2 166	1 660	2 331
Dried currants, raisins, etc.	4 423	4 749	4 491	7 296	4 422	5 244
Vegetables:						
Potatoes .....	14 684	15 321	22 373	23 491	21 719	39 632
Tomatoes .....	9 963	8 312	10 608	8 319	7 237	6 843
Onions .....	6 439	6 626	9 369	16 379	8 070	15 513
Other .....	24 383	18 422	22 567	26 670	25 058	30 079
Other crops .....	13 281	15 144	13 112	17 971	20 591	19 018
Total crops (excluding pastures) .....	591 526	762 722	662 944	719 550	469 046	1 063 854
Pastures:						
Pasture seed .....	5 493	8 401	9 221	6 908	5 914	12 262
Pastures cut for hay .....	12 594	14 725	21 427	32 782	30 472	44 260
Total pastures .....	18 087	23 126	30 648	39 690	36 386	56 522
Gross value of crops .....	609 613	785 848	693 592	759 240	505 432	1 120 376

Market prices of principal crops grown in South Australia for the years 1978-79 to 1983-84 are set out in the following table.

## Prices of Principal Crops, South Australia

Commodity	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84 <sub>p</sub>
Dollars per tonne						
Cereals:						
Wheat (a) .....	127.83	153.24	154.92	160.26	177.54	164.86
Barley (a) .....	83.95	126.84	144.99	139.65	155.35	153.95
Oats .....	67.61	86.57	155.81	121.10	161.85	130.55
Rye .....	74.67	119.62	145.00	148.52	186.12	131.73
Fruit:						
Apples .....	540.00	500.00	703.00	740.00	702.67	759.33
Apricots .....	612.00	804.00	722.00	830.00	750.00	1 018.00
Peaches .....	867.50	1 071.00	990.00	929.00	608.00	1 230.00
Pears .....	460.00	499.00	619.38	560.00	665.00	692.77
Oranges;						
Navel (a) .....	188.97	197.00	191.87	254.75	195.11	272.75
Other (a) .....	179.94	170.40	178.81	200.97	201.92	212.03
Grapes;						
Table .....	743.75	809.00	913.00	812.00	664.00	961.00
Wine (b) .....	146.61	158.49	176.77	189.28	205.06	228.64

## Prices of Principal Crops, South Australia (continued)

Commodity	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84 <sup>p</sup>
Dollars per tonne						
Vegetables:						
Potatoes (a) .....	164.26	167.38	231.25	234.54	227.35	328.77
Onions .....	235.33	220.50	332.00	472.83	219.79	465.30
Tomatoes;						
Glasshouse .....	819.00	678.00	886.00	817.00	1 051.00	1 080.00
Other .....	373.00	557.00	769.04	479.37	809.00	582.00

(a) Average price realised. (b) Weighted average price at winery.

## PASTORAL AND DAIRYING

Pastoral activities, with sheep grazing predominant, are widespread in South Australia under widely varying climatic conditions from the arid saltbush plains in the Far North through to the lush, well-watered pastures of the South East.

Cattle numbers reached their highest peak of 1 891 000 in 1975-76, but have dropped in the following years to less than half that number. In 1977-78 sheep numbers fell to their lowest level for nearly twenty years, but have steadily recovered to reach over 16 million in 1983-84, overcoming the set-back of drought and bushfires in 1982-83.

## The Dog Fence

This fence is an unbroken barrier of wire netting about two metres high extending for more than 8 000 kilometres through South Australia, along the South Australia-New South Wales and the New South Wales-Queensland borders and through part of Queensland. It has been erected to protect the sheep lands of these States from dingoes.

## SHEEP

## Numbers and Distribution

At 31 March 1970 a record number of 19 747 000 sheep were being maintained in South Australia. In 1983-84 the number reached 16 368 000.

The next table shows the total number of sheep in statistical divisions at 31 March for the years 1980 to 1984.

## Sheep Numbers: Statistical Divisions, South Australia, At 31 March

Statistical Division	1980	1981	1982	1983	1984
			'000		
Adelaide .....	64	76	64	65	59
Outer Adelaide .....	1 912	2 033	2 021	1 975	2 104
Yorke and Lower North .....	2 354	2 490	2 350	2 161	2 276
Murray Lands .....	2 127	2 255	2 273	2 027	2 244
South East .....	4 347	4 673	4 545	4 579	4 765
Eyre .....	2 246	2 360	2 388	2 382	2 545
Northern .....	2 997	3 170	3 069	2 259	2 374
Total .....	16 046	17 056	16 709	15 448	16 368

**Breeds of Sheep**

The predominant breed in South Australia is the Merino which accounts for over 80 per cent of the total sheep numbers. The South Australian Merino, having a robust constitution and a capacity to travel long distances to water, has adapted well to the hot, dry conditions of the interior.

Of the remaining recognised breeds, the Australasian breeds, Corriedale and Polwarth, are most important, with Poll Dorset numbers having shown a considerable increase. The Corriedale and Polwarth are dual purpose sheep breeds used for meat but at the same time producing wool of good quality. The Corriedale is a fixed cross between Lincoln rams and Merino ewes while the Polwarth is a fixed comeback breed from the mating of Merino rams with Lincoln-Merino ewes.

**Breeds of Sheep, South Australia, At 31 March**

Breed	1971	1974	1977	1980	1983
			'000		
Merino .....	16 304.1	14 212.0	13 174.3	13 590.9	12 873.4
Corriedale .....	940.6	646.2	557.1	607.2	560.3
Dorset Horn .....	} 77.9	{ 46.5	45.6	95.4	40.7
Poll Dorset .....			58.3	132.7	95.0
Border Leicester .....	27.7	25.8	108.8	119.0	115.0
Polwarth .....	147.6	137.3	120.0	131.3	103.8
Romney Marsh .....	17.6	11.4	18.4	31.4	28.8
Ryeland .....	5.7	4.0	6.2	4.2	6.0
Southdown .....	4.7	3.1	2.3	1.9	4.6
Suffolk .....	18.4	19.0	23.9	41.0	37.1
Other .....	4.3	7.7	9.6	17.0	12.9
Merino-Comeback .....	214.7	133.6	73.5	156.9	285.2
Crossbred .....	1 402.6	1 149.3	934.2	1 117.3	1 285.2
Total .....	19 165.8	16 430.9	15 132.3	16 046.3	15 448.0

British longwools (Border Leicester, Cheviot and Romney Marsh) are used for mating with the Merino or crossbred ewes to produce fat lambs, but useful types of comeback and crossbred wools are also yielded. British shortwools (Dorset Horn, Ryeland, Suffolk, Southdown and Shropshire) are used principally for production of export lambs.

The following table shows the age and sex of sheep in South Australia at 31 March from 1980 to 1984.

**Age and Sex of Sheep, South Australia, At 31 March**

Year	Rams	Breeding Ewes	Other Ewes	Wethers	Lambs and Hoggets (under one year)	Total Sheep
				'000		
1980 .....	223	8 042	525	3 232	4 024	16 046
1981 .....	234	8 433	541	3 683	4 164	17 056
1982 .....	235	8 391	551	3 637	3 894	16 709
1983 .....	229	8 083	627	3 156	3 353	15 448
1984 .....	223	8 597	578	3 192	3 778	16 368

**Lambing**

In 1969 a record 8 598 000 ewes were mated and the number of lambs marked totalled 7 193 000. In 1984, 7 415 000 ewes were mated and the number of lambs marked was 6 088 000. Details of lambs marked and the lambing percentage in each statistical division in 1982-83 and 1983-84 are given in the next table.

**Lambing: Statistical Divisions, South Australia**

Statistical Division	Lambs Marked		Lambing Percentage (a)	
	1982-83	1983-84	1982-83	1983-84
	'000		Per cent	
Adelaide .....	26	27	86.69	88.27
Outer Adelaide .....	770	803	81.14	83.51
Yorke and Lower North .....	861	894	78.46	83.15
Murray Lands .....	888	923	76.16	81.97
South East .....	1 899	1 968	86.82	89.29
Eyre .....	747	831	74.46	79.53
Northern .....	694	642	57.66	65.96
Total .....	5 885	6 088	77.07	82.10

(a) Percentage of lambs marked to ewes mated.

**Sheep Shearing and Wool-clip**

In the agricultural areas of the State most shearing takes place during the late winter and spring months, August to November. Shearing in the South East Division occurs somewhat later, with 50 per cent of the wool-clip being obtained in the period October to November. In the northern pastoral areas (Northern Division) there are two main seasons, February-March and August-September. The next table gives details of sheep and lambs shorn, wool-clip and average fleeceweight in South Australia for the years 1979-80 to 1983-84.

**Sheep and Lambs Shorn: Wool-clip and Average Fleeceweight, South Australia**

Classification	1979-80	1980-81	1981-82	1982-83	1983-84
	NUMBER SHORN ('000)				
Sheep .....	13 421	14 452	15 102	14 851	14 295
Lambs .....	4 129	4 442	4 310	3 976	4 013
Total .....	17 550	18 894	19 412	18 827	18 308
	WOOL-CLIP ('000 kg)				
Sheep .....	79 249	86 588	86 101	85 461	89 339
Lambs .....	7 862	8 438	8 032	7 232	7 887
Crutchings .....	4 094	4 430	4 307	3 388	4 287
Total .....	91 205	99 456	98 440	96 081	101 513
	AVERAGE FLEECEWEIGHT (kg) (a)				
Sheep .....	6.21	5.99	5.70	5.98	6.55
Sheep and lambs .....	5.20	5.26	5.07	5.10	5.54

(a) Includes crutchings.

The total wool-clip, including crutchings, exceeded 100 million kilograms for the first time in 1966-67 and returned to that level in 1980-81. Approximately 88 per cent of the total wool is obtained from adult sheep.

The average fleeceweight in South Australia is approximately 6.25kg a head for adult sheep, with a record 6.55 kg a head being achieved in 1983-84. This is significantly higher than the yield obtained in other States, and is primarily because of the larger size of the South Australian Merino, its broader wool quality and longer thicker-stapled fleece.

A breakdown of the State figures for 1983-84 by statistical divisions is given in the next table. This shows the high average fleeceweight obtained in the northern pastoral areas. The relatively light average fleece obtained in the South East Division is explained partly by the lower proportion of Merino sheep in the area (at 31 March 1983 only 68 per cent of total sheep in the South East Division were Merinos, compared with a total State figure of 83 per cent), but more importantly by the lighter wool quality of the smaller framed sheep in this area.

**Sheep and Lambs Shorn: Wool-clip and Average Fleeceweight, Statistical Divisions  
South Australia, 1983-84**

Statistical Division	Number Shorn			Wool-clip			Average Fleeceweight(a)	
	Sheep	Lambs	Total	Sheep (a)	Lambs	Total (a)	Sheep	Sheep and Lambs
		'000			'000 kg		kg	
Adelaide .....	49	10	59	283	15	298	5.80	5.08
Outer Adelaide .....	1 855	508	2 363	12 062	974	13 036	6.50	5.51
Yorke and Lower North .....	1 995	567	2 562	13 540	1 153	14 692	6.79	5.73
Murray Lands .....	1 896	609	2 505	12 815	1 155	13 970	6.76	5.58
South East .....	4 331	1 309	5 640	27 324	2 704	30 028	6.31	5.32
Eyre .....	2 218	594	2 812	15 169	1 074	16 244	6.84	5.78
Northern .....	1 951	415	2 366	12 433	813	13 246	6.37	5.60
Total .....	14 295	4 013	18 307	93 626	7 887	101 513	6.55	5.54

(a) Includes crutchings.

## WOOL INDUSTRY

### Production of Wool

Total wool production consists of shorn wool (including crutchings) plus fellmongered wool, dead wool and wool exported on skins. Fellmongering is the process of removing wool from the pelt by bacterial action (sweating) or by treatment with chemicals. Dead wool is picked from the carcasses of dead sheep.

**Wool Production and Value, South Australia**

Season (a)	Production			Value of Wool Production
	Shorn Wool	Other (b)	Total	
		'000 kg		\$'000
1981-82 .....	98 440	5 178	103 617	260 548
1982-83 .....	96 081	6 925	103 006	258 848
1983-84p .....	101 515	5 400	106 916	289 266

(a) Year ended 30 June. (b) Includes fellmongered wool, dead wool and wool exported on skins.

From 1965-66 to 1975-76, wool production exceeded 100 million kilograms each year. In the past three years with improved seasonal conditions flock numbers have increased and total wool production has risen from 87 million kg in 1978-79 to over 100 million kg in 1982-83. Wool prices have varied markedly resulting in the gross value of production being as low as \$65 million in 1970-71 and as high as \$289 million in 1983-84.

### Wool Quality and Marketing

For many years approximately 9 per cent of the wool grown in South Australia was sold outside the auction system. This percentage reached 19 per cent in 1972-73, fell to 14 per cent in 1973-74, recovered to 22 per cent in 1976-77 and is now approximately 15 per cent. Of the South Australian wool passing through the auction system approximately 80 per cent is received by the Adelaide selling centre with the remainder predominantly of South Eastern origin, going to Victorian selling centres. A similar inflow of wool occurs from western New South Wales, and to a lesser extent from western Victoria.

Because of the development of a system of Objective Measurement for wool the traditional method of displaying wool for sale, whereby sample bales are opened for inspection by buyers, is declining in importance and much wool is now sold by sample. A high standard of clip preparation is required for sale by sample as there must be very little variation between the bales of wool of each grade.

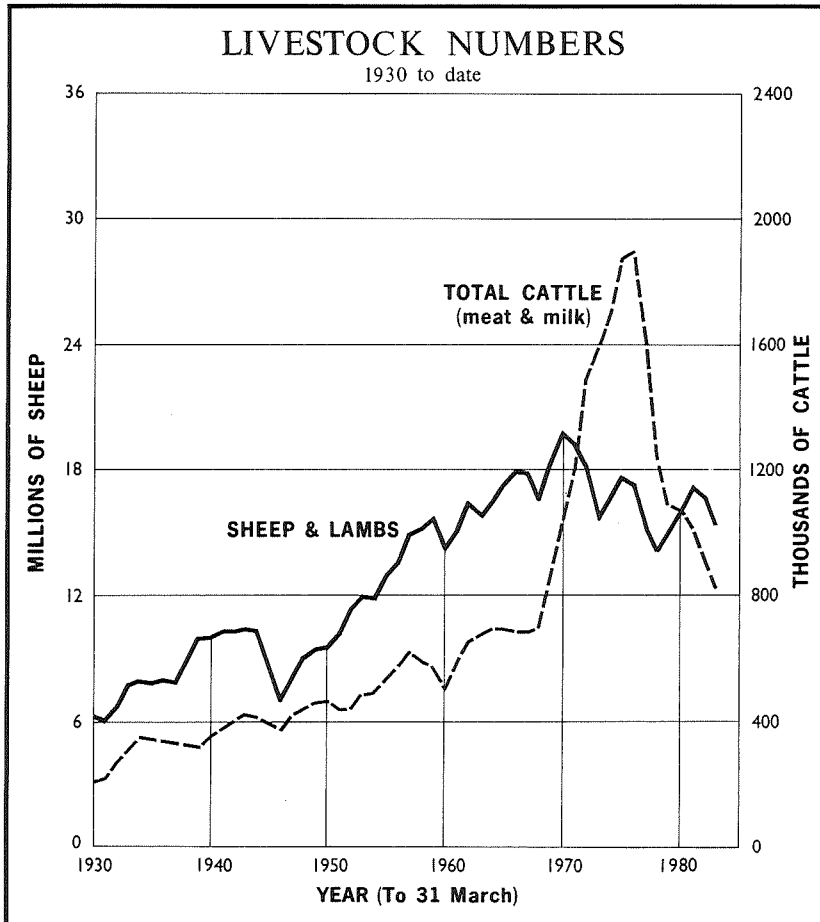
When a suitable lot is received into store a core sample is taken and is tested to give measures of average fibre diameter (mean micron), degree of vegetable fault, and yield of wool (by three methods) and this information is entered on a certificate. As various other factors (*e.g.* length of wool, type of vegetable fault) must be assessed, a grab sample of eight kilograms is taken from each lot and this is displayed on a show floor, together with the Objective Measurement certificate, for examination by buyers.

An advantage of the Objective Measurement system of clip preparation is that the sample may be inspected at a site remote from the location of the bulk of the clip. This has enabled wool held in Adelaide stores to be inspected, and sold, in Melbourne sales, which is of particular value to growers who deliver wool in late autumn and winter when there may be six to eight weeks between sales in Adelaide.

Quality Analysis of Greasy Wool Sold at Auction in South Australia

Mean Micron Classification	1979-80	1980-81	1981-82	1982-83	1983-84
	Per cent				
20 and finer .....	1.8	1.7	2.8	2.4	1.3
21 .....	4.9	5.6	7.1	6.7	4.1
22 .....	15.6	19.4	20.8	21.1	15.2
23 .....	18.3	20.3	20.2	21.1	18.2
24 .....	22.9	23.0	22.1	22.3	25.7
25 .....	14.9	14.9	12.4	11.9	15.4
26 .....	9.0	6.5	5.6	5.7	8.2
27 to 38 .....	11.3	7.9	7.2	7.2	10.1
Oddments .....	1.5	1.9	1.8	1.6	1.8
Total .....	100.0	100.0	100.0	100.0	100.0

The incidence of vegetable matter reduces the yield of all wool types. If the extent of vegetable fault is greater than 14 per cent of the wool's greasy weight the wool has to be treated by the carbonising process. In most seasons approximately 70 per cent of South Australian wool is free of, or contains only light burr and seed; almost 15 per cent contains medium or heavy burr and seed and some 10 per cent is carbonising wool.



## Incidence of Vegetable Fault in Wool Sold at Auction in South Australia

Season	Free or Near Free	Light Burr and/or Seed	Medium Burr and/or Seed	Heavy Burr and/or Seed	Carbon- ising Wool	Carding/ Combing Odd- ments	Total
Percentage of Total Number of Bales							
1980-81 .....	35.0	37.0	13.4	3.4	9.4	1.8	100.0
1981-82 .....	39.4	34.5	11.6	2.6	10.1	1.8	100.0
1982-83 .....	41.8	34.4	12.2	0.8	9.2	1.6	100.0

Details relating to Adelaide wool sales during the past three years are shown in the following table.

## Adelaide Wool Sales

Year ended 30 June	Wool Sold (Scoured and Greasy)		Amount Realised	Average Price Per kg (Greasy)	In Store at 30 June
	Bales	Weight			
	Number	'000 kg	\$'000	Cents	Bales
1982 .....	465 914	77 962	204 922	262.85	18 154
1983 .....	440 318	74 094	196 517	265.23	15 268
1984 .....	460 466	78 888	221 754	281.10	18 031

## Wool Prices

Prices paid for wool sold in South Australia tend to be on average less than prices realised in other States, this being partly attributable to the large proportion of medium to broad quality wools grown in South Australia and in western New South Wales. In 1983-84 the average price for wool sold at auctions in Australia was 293.85 cents per kg greasy, compared with 281.10 cents per kg in South Australia.

## CATTLE

In comparison with other States, cattle grazing is not a major industry in South Australia. Of the cattle in Australia at 31 March 1984 just over 3 per cent of those used mainly for meat production and about 6 per cent of those for milk production were in South Australia. At 31 March 1984 the total number of cattle was 812 600.

## Cattle Numbers: Statistical Divisions, South Australia, At 31 March 1984

Classification	Statistical Division							Total
	Adelaide	Outer Adelaide	Yorke and Lower North	Murray Lands	South East	Eyre	Northern	
	'000							
Cattle for milk production:								
Bulls ( <i>a</i> ) .....	0.1	0.9	0.1	0.3	0.7	0.1	0.0	2.2
Cows .....	3.3	49.3	2.9	22.3	21.8	0.8	0.9	101.3
Heifers .....	1.1	14.6	1.1	7.7	6.1	0.2	0.2	31.2
Calves under one year .....	0.7	11.1	0.9	5.6	5.1	0.3	0.2	23.9
House cows .....	0.1	0.6	0.7	0.5	0.6	0.6	0.2	3.3
Total .....	5.3	76.6	5.7	36.4	34.2	2.0	1.6	161.9



**Cattle Numbers: Statistical Divisions, South Australia, At 31 March 1984 (continued)**

Classification	Statistical Division							Total
	Adelaide	Outer Adelaide	Yorke and Lower North	Murray Lands	South East	Eyre	Northern	
	'000							
Cattle for meat production:								
Bulls (a) .....	0.2	2.2	0.9	1.4	8.7	0.7	2.3	16.5
Cows and heifers .....	4.4	42.4	15.7	33.9	200.6	15.0	58.8	370.8
Calves under one year .....	2.3	21.8	8.4	20.7	85.0	9.0	21.8	169.0
Other cattle .....	0.9	7.8	3.0	5.7	57.9	1.5	17.8	94.4
Total .....	7.7	74.2	28.0	61.6	352.2	26.3	100.7	650.7
Total cattle .....	13.0	150.8	33.7	98.0	386.4	28.3	102.3	812.6

(a) Used or intended for service.

**Cattle for Meat Production**

Numbers of cattle for meat production have increased in South Australia. At 31 March 1964, 424 000 cattle for meat production were recorded (this figure is not strictly comparable with earlier figures because of a change of classification adopted in 1964); by 31 March 1969, 631 000 cattle were reported for meat production on 8 706 rural establishments. The number at 31 March 1976 had risen to 1 683 000 cattle, but since then numbers have declined significantly and at 31 March 1984 there were 651 000 cattle for meat production.

In the northern pastoral areas, Shorthorns are the predominant breed and there are lesser numbers of Herefords; in the South East, Herefords and Shorthorns are the main breeds and there are substantial numbers of Aberdeen Angus while near Adelaide, where a number of studs are located, several breeds are well represented. In recent years several European breeds have been introduced, most notably the Charolais.

**Cattle for Milk Production**

From March 1964 to March 1968 the total number of cattle for milk production declined by 39 000 to 231 000. A further decline in total numbers began in 1972-73 and the total number at March 1984 was 162 000. Distribution within the State is little changed although there has been some tendency for concentration in the principal dairying areas.

Properties in South Australia on which dairying is the main activity are situated mainly in the areas where high rainfall or irrigation permits the growing of sown pastures, but many of the mixed farms in the better cereal growing areas carry herds used mainly for milk production. Dairy production on these farms is almost entirely in the form of cream for butter making, whereas the properties in the down pasture areas mainly market whole milk, either for consumption in the Adelaide area or for cheese making.

The Adelaide Hills district, comprising the Mount Lofty Ranges and areas as far south as Cape Jervis and Encounter Bay, embraces some of the best dairy land in the State and includes most of the properties devoted specifically to dairy farming. Of the breeds used mainly for milk production, Friesians and Jerseys predominate, with Guernseys, Australian Illawarra Shorthorn, Ayrshires and their crosses in use to a lesser extent.

The Lower Murray swamps extending from Mannum to Wellington are reclaimed areas ideally suited to dairying pursuits, combining the attributes of suitable climate, good soil, and an abundant water supply. The area has a very high carrying capacity of predominantly Friesian cattle.

The Lakes District owes much to the barrages across the mouth of the Murray which

have helped to maintain the waters of Lake Alexandrina and Lake Albert in a reasonably fresh state. These have greatly contributed to the improvement of the productivity of this area and also have had the effect of maintaining a greater control over the level of the water in the river, thereby facilitating irrigation of the reclaimed swamps upstream. The cattle for milk production are principally Jersey breed.

The most important dairying area not serving the Adelaide market is the Lower South East, where the high rainfall and low evaporation rate combine to allow a fairly long growth period after the autumn and winter rains and spring flush of feed. Most breeds are well represented in the district, the Jersey and Friesian being slightly more popular.

## DAIRY PRODUCE

### Milk

Total milk production in any one year is not known precisely. However, as details are known of two major components of total milk utilisation in South Australia, namely the amount consumed by factories in the production of milk, cheese, butter and other milk products and home consumption in the Metropolitan Milk Board area, an estimate can be made.

The following table shows the estimated production of whole milk and the quantity of this milk used for various purposes in 1983-84 and earlier seasons.

**Production and Utilisation of Milk, South Australia**

Year	Total Milk Produced	Milk Used for		
		Factory Cheese (a)	Home Consumption	
			Milk Board Area	Outside Milk Board Area
		'000 litres		
1981-82 .....	305 648	128 404	93 961	39 770
1982-83 .....	342 616	156 421	95 198	42 196
1983-84 .....	382 000	197 390	96 263	41 426

(a) Factory production accounts for virtually all cheese produced. Source: Australian Dairy Corporation.

### PIGS

In South Australia pigs were normally kept as a sideline on mixed farms or in conjunction with dairy cattle, but the trend is towards specialising in pigs.

There have been substantial fluctuations in the pig population from year to year induced by the exceptional variability of prices. Until 1979 the numbers generally declined. The total number exceeded 200 000 for the first time in 1966 and has continued to exceed that number in subsequent years. Of the 417 000 pigs at 31 March 1984, approximately 50 per cent were in Outer Adelaide, and Yorke and Lower North Divisions. The principal breeds in South Australia are Large White, Berkshire, Landrace and Tamworth.

The following table shows the number of pigs on rural establishments at 31 March for the last five years.

## Pig Numbers, South Australia

At 31 March	Boars	Breeding Sows	All Other	Total
1980 .....	4 362	(a) 51 888	341 455	397 705
1981 .....	3 959	44 223	345 334	393 516
1982 .....	3 587	43 422	327 369	374 378
1983 .....	3 710	46 231	355 205	405 146
1984 .....	3 698	45 418	367 387	416 503

(a) Includes gilts.

In the following table, rural establishments with pigs at 31 March 1984 are classified according to the size of the pig herd and the number of breeding sows. Of the 19 923 establishments of all types, 1 980 carried pigs.

**Rural Establishments Classified to Number of Breeding Sows and Size of Pig Herd**  
**South Australia, 1983-84** <sup>(a)</sup>

Number of Breeding Sows	Size of Pig Herd (Numbers)					Establishments with Breeding Sows
	1-9	10-19	20-49	50-99	100 and Over	
1-4 .....	119	123	153	18	4	417
5-9 .....	9	25	175	118	20	347
10-19 .....	—	4	28	141	140	313
20-49 .....	—	—	—	17	297	314
50-99 .....	—	—	—	—	104	104
100 and over .....	—	—	—	—	63	63
Total .....	128	152	356	294	628	1 558

(a) Excludes 422 establishments with pig herds which carried no breeding sows.

## MEAT PRODUCTION AND MARKETING

South Australia is a relatively small meat producer, providing approximately 9 per cent of total Australian production. The following table shows the number of livestock slaughtered for human consumption (including exports) and the production of meat during the last five years. Slaughtering and meat production on rural establishments are included in these figures.

## Livestock Slaughtered and Meat Produced, South Australia

Season	Livestock Slaughtered for Human Consumption			Meat Production (Bone-in Weight)			
	Cattle and Calves	Sheep and Lambs	Pigs	Beef and Veal	Mutton and Lamb	Pigmeat	Total
		'000			Tonnes		
1979-80 .....	502	3 451	472	90 643	64 259	28 751	183 653
1980-81 .....	539	3 549	519	93 779	67 904	31 442	193 125
1981-82 .....	580	3 339	528	100 789	61 603	32 281	194 673
1982-83 .....	629	4 149	540	105 865	77 143	34 319	217 327
1983-84 .....	441	2 857	554	82 329	56 802	34 011	173 142

On 1 December 1979 new livestock descriptions were introduced in South Australia which are standardised with other States (in particular New South Wales, Victoria and Western Australia) to allow more precise comparisons between markets in other States, and with other markets in South Australia. These descriptions are based on carcass classifications developed for cattle, sheep and lambs by the Australian Meat and Livestock Corporation. The new descriptions are categorised on the basis of sex and age, then subdivided into carcass weight, and then further divided on the basis of fatness using visual estimates of fat depth at the 10/11 rib position ranging from Very Lean to Very Fat. In the table below which shows average market prices of some of the principal classes of livestock, the discontinued descriptions (Prime, medium; Good etc.) have been estimated for 1980 to allow comparison of prices between the old and new descriptions over the years shown. No changes to classification of calves and pigs have been made.

Livestock, Average Prices at Adelaide Market

Class of Stock	1979	1980	1981	1982	1983	1984
Dollars						
Fat cattle:						
Bullocks and steers;						
Prime, medium .....	422.85	405.43	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Young, 120-160 kg medium .....	<i>n.a.</i>	248.46	221.02	197.96	273.67	302.85
Steers, 250-300 kg medium .....	<i>n.a.</i>	405.43	354.00	327.59	438.27	464.25
Bullocks, 300-350 kg medium .....	<i>n.a.</i>	467.18	395.80	365.10	408.04	525.37
Cows;						
Good .....	229.05	255.97	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
160-250 kg medium .....	<i>n.a.</i>	286.42	249.43	228.71	277.86	342.50
Calves;						
Prime vealers .....	155.23	172.00	151.73	133.91	166.99	222.02
Good .....	97.86	107.78	114.56	84.80	124.60	155.56
Fat sheep:						
Wethers;						
Prime .....	21.44	24.48	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Over 22 kg medium .....	<i>n.a.</i>	24.01	21.56	16.84	21.15	23.34
Ewes;						
Under 22 kg medium .....	<i>n.a.</i>	18.43	16.60	10.80	13.04	13.24
Lambs;						
Prime, medium .....	23.68	24.32	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
16-19 kg medium .....	<i>n.a.</i>	23.42	22.18	18.65	22.72	22.07
Young						
16-19 kg medium .....	<i>n.a.</i>	24.45	19.43	20.49	22.61	24.20
Pigs:						
Choppers .....	203.92	144.44	141.52	195.75	171.94	170.71
Baconers .....	98.52	91.08	106.42	121.96	101.84	104.94
Porkers .....	62.96	55.64	65.84	82.22	68.86	69.64

## GROSS VALUE OF LIVESTOCK PRODUCTS AND SLAUGHTERINGS

Gross value is the value placed on recorded production at the wholesale prices realised in principal markets. The following table shows for the past five years the gross value of livestock products, and livestock slaughterings and disposals.

**Gross Value of Livestock Products and Livestock Slaughtering and Disposals  
South Australia**

Particulars	1979-80	1980-81	1981-82	1982-83	1983-84 <sup>p</sup>
<b>LIVESTOCK PRODUCTS (\$'000)</b>					
Wool .....	215 423	246 646	260 548	258 848	289 266
Whole milk used for:					
Butter .....	2 574	23 000	27 052	34 510	36 510
Cheese .....	16 299				
Human consumption ....	23 468	25 953	24 861	32 902	37 475
Eggs .....	20 564	23 080	22 511	24 163	24 723
Honey and beeswax .....	3 952	3 194	3 290	2 475	2 618
<b>Total livestock products</b>	<b>282 279</b>	<b>321 873</b>	<b>338 261</b>	<b>352 898</b>	<b>390 592</b>
<b>LIVESTOCK SLAUGHTERINGS AND DISPOSALS (\$'000)</b>					
Cattle and calves .....	107 295	125 836	119 972	135 385	101 557
Sheep and lambs .....	98 827	103 014	121 982	102 259	74 745
Pigs .....	37 006	42 548	53 272	51 908	49 595
Poultry .....	30 312	35 497	35 860	46 453	49 251
<b>Total livestock slaughtering and disposals</b>	<b>273 440</b>	<b>306 896</b>	<b>331 085</b>	<b>336 006</b>	<b>275 148</b>

**OTHER RURAL INDUSTRIES**

**Poultry Farming**

Poultry farming is a specialised and distinct industry and it is from the specialised hatcheries and chicken raising establishments that the bulk of commercial production is obtained. The industry can be divided into two categories; the production of eggs, and the raising of poultry for meat. Chickens, scientifically bred for rapid weight gain and known as 'broilers', account for over 90 per cent of total poultry slaughtered.

The main production centres for both categories of this industry are located within an 80 kilometre radius of Adelaide, near the processing works and main consumption outlets. Particular concentrations of growers are at Murray Bridge and Gawler, with some broiler growers established in the Adelaide Hills.

The trend in the egg industry in South Australia is towards a reduction in the total number of poultry farms, but an increase in average flock size. Housing of birds for commercial purposes is largely planned on the intensive principle, with deep litter pens or single and multiple bird cage units. Laying stock consists mainly of a specially produced crossbreed between the White Leghorn and Australorp breeds.

**Poultry Numbers and Egg Production: South Australia, At 31 March <sup>(a)</sup>**

Particulars	1980	1981	1982	1983	1984
<b>'000</b>					
Hens and pullets .....	1 529	1 532	1 321	1 275	1 315
Other fowls and chickens .....	3 267	2 921	2 867	3 544	3 372
Ducks .....	10	5	5	4	6
Turkeys .....	9	8	11	8	16
<b>Egg production (b) .....</b>	<b>210 723</b>	<b>205 257</b>	<b>184 276</b>	<b>181 104</b>	<b>178 428</b>

(a) Excludes poultry kept in backyards. (b) Recorded by the South Australian Egg Board. Year ended 30 June.

The annual average egg production controlled by the South Australian Egg Board was 15.4 million dozen in the five years ended 1970-71, 19.6 million dozen in the five years ended 1975-76, and in the five years ended 1983-84 the average was 16.0 million dozen. However, these figures do not take into account movement of eggs interstate independently of the Egg Board, which may represent a significant proportion of total egg production.

### Broiler Industry

The following table shows details of poultry slaughtered for human consumption for the last six years.

**Poultry Slaughtered for Human Consumption**  
**South Australia <sup>(a)</sup>**

Period	Chickens (Broilers, Fryers or Roasters)	Hens and Stags	Ducks and Drakes	Turkeys	Total
NUMBER SLAUGHTERED ('000)					
1978-79 .....	19 867	465	26	5	20 363
1979-80 .....	22 937	451	23	12	23 423
1980-81 .....	24 608	366	15	21	25 011
1981-82 .....	24 660	303	11	33	25 007
1982-83 .....	27 696	387	10	51	28 144
1983-84 .....	28 542	399	8	65	29 014
DRESSED WEIGHT OF POULTRY SLAUGHTERED (Tonnes)(b)					
1978-79 .....	22 351	801	46	33	23 230
1979-80 .....	25 943	739	41	62	26 786
1980-81 .....	27 975	598	27	104	28 704
1981-82 .....	27 281	500	23	177	27 980
1982-83 .....	31 214	688	19	257	32 177
1983-84 .....	33 549	665	16	325	34 555

(a) Excludes geese slaughtered.

(b) Dressed weight of whole birds, pieces and giblets as reported by producers.

The broiler industry in South Australia has grown rapidly during the past 25 years, annual production increasing from about half a million birds in 1959 to approximately 29 million birds at the present time. Broilers are specially bred meat strain birds of either sex, that are slaughtered between eight and ten weeks of age at a live weight of approximately 1.5 kg. This rapid growth and efficient conversion of feed to meat has been achieved by extensive breeding programs; the use of specially prepared high protein and energy value poultry feeds; growth promotion and disease control drugs; and by the development of enclosed, factory-like broiler houses, with controlled temperature, ventilation and light, conducive to fast growth.

### Beekeeping

Beekeeping in South Australia is a small industry—in 1983-84 there were 308 beekeepers with forty or more hives. Most commercial apiarists operate on a migratory basis, following the flowering of the various species of honey flora. The production of honey and beeswax fluctuates considerably from year to year, depending upon seasonal conditions.

**Beekeeping, South Australia <sup>(a)</sup>**

Season	Beekeepers	Hives		Honey Produced	Yield of Honey per Productive Hive	Beeswax Produced
		Productive	Unproductive			
	No.	No.	No.	'000 kg	kg	'000 kg
1979-80 .....	438	81 459	15 827	5 098	63	98
1980-81 .....	442	80 191	23 328	3 604	45	75
1981-82 .....	394	73 611	19 275	3 955	54	86
1982-83 .....	322	60 338	20 584	3 224	53	61
1983-84 .....	308	60 580	16 065	3 269	54	63

(a) Excludes particulars for producers having less than forty hives.

**Further References**

Additional information may be found in the following publications:

- 7111.4 *Principal Agricultural Commodities (Preliminary)—South Australia*
- 7113.4 *Agriculture—South Australia*
- 7211.0 *Sheep Numbers, Shearing and Wool Production Forecast—Australia*
- 7221.0 *Livestock and Livestock Products—Australia*
- 7221.4 *Livestock and Livestock Products—South Australia*
- 7310.0 *Viticulture—Australia*
- 7321.4 *Crops and Pastures—South Australia*
- 7322.0 *Fruit—Australia*
- 7322.4 *Fruit—South Australia*
- 7411.0 *Agricultural Land Use and Selected Inputs—Australia*
- 7411.4 *Agricultural Land Use and Selected Inputs—South Australia*
- 7503.0 *Value of Agricultural Commodities Produced—Australia*
- 7503.4 *Value of Agricultural Commodities Produced—South Australia*

**9.2 MINING, FORESTRY AND FISHERIES****MINING**

South Australia has a well developed mineral industry and in recent years crude oil and natural gas have surpassed coal and iron ore as the major products. The State also has very large resources of industrial minerals which make up a significant proportion of the total annual value of mineral production.

**MINING ADMINISTRATION**

The Mining Act, 1971-1983 reserves all minerals to the Crown and regulates and controls all mining operations in South Australia.

The state and conditions of the mine, machinery, ventilation, and all other matters relating to the safety, health and well-being of the employees and general public are regulated by the Mines and Works Inspection Act, 1920-1978.

The Petroleum Act, 1940-1984 and the Petroleum (Submerged Lands) Act, 1967-1982 provide for the control of petroleum exploration and the production, conservation and distribution of petroleum by pipeline.

The administration of these Acts is the responsibility of the Minister of Mines and Energy and the Director-General, Department of Mines and Energy. The principal functions of the Department of Mines and Energy are:

- (i) the administration of mining and petroleum legislation including the granting of titles and collection of royalties and fees;
- (ii) geological and geophysical investigations to ascertain the extent and nature of the State's mineral resources;
- (iii) drilling to test mineral deposits, petroleum reserves and underground water supplies;
- (iv) the testing and treatment of minerals, generally in arrangement with the Australian Mineral Development Laboratories;
- (v) control of mining and rehabilitation;
- (vi) co-ordinating State Government activities and formulating policy advice in the discovery, assessment and development of all energy resources within the State.

### MINERAL INDUSTRY STATISTICS

A mining establishment is one predominantly engaged in an activity specified in Division B of the Australian Standard Industrial Classification (ASIC). The ASIC defines 'mining' as including the extraction of minerals occurring naturally as solids such as coal and ores, liquids such as crude petroleum, or gases such as natural gas, by such processes as underground mining, open-cut extraction methods, quarrying, operation of wells or evaporation pans, dredging or recovery from ore dumps or tailings. Establishments mainly engaged in dressing or beneficiating ores or other minerals by crushing, milling, screening, washing, flotation or other, including chemical beneficiation processes, or mainly engaged in briquetting or iron ore pelletising are included because the processes are generally carried out at or near mine sites as an integral part of mining operations. Natural gas absorption and purifying plants are also included.

Excluded are establishments mainly engaged in refining or smelting, or in the manufacture of products of mineral origin.

The following two tables detail mining establishments operations in South Australia for 1982-83 classified according to industry subdivision.

**Mining Establishments: Summary of Operations by Industry Subdivision  
South Australia, 1982-83**

Industry Subdivision	ASIC (a)	Number of Establishments Operating at 30 June 1983	Persons Employed (b)			Wages and Salaries  \$ million
			Males	Females	Total	
Metallic minerals .....	11	6	2 537	308	2 845	50.8
Coal .....	12	1				
Crude petroleum including natural gas .....	13	1				
Construction materials .....	14	60	574	61	635	12.0
Other non-metallic minerals .....	15	41	344	8	352	6.2
Total mining, excluding services to mining .....	..	109	3 455	377	3 832	69.0

(a) Australian Standard Industrial Classification 1978 edition.

(b) At 30 June 1983; includes working proprietors.



Statistics on the operations of establishments in Division B are collected each year in the mining census, which since 1968-69 has been conducted on an integrated basis with other economic censuses.

Metallic minerals (mainly copper and iron ore), coal and natural gas operations accounted for 74.2 per cent of mining employment. Construction materials (building stone, gravel, sand and road materials) operations employed 16.6 per cent of total mining employment.

**Mining Establishments: Turnover and Value Added by Industry Subdivision  
South Australia, 1982-83**

Industry Subdivision	ASIC (a)	Turnover	Stocks at 30 June		Purchases, Transfers in and Selected Expenses	Value Added
			1982	1983		
\$ million						
Metallic minerals .....	11	321.1				
Coal .....	12		50.4	68.7	123.2	216.3
Crude petroleum including natural gas .....	13					
Construction materials .....	14	54.5	5.3	6.0	20.9	34.2
Other non-metallic minerals .....	15	33.1	8.0	9.6	20.7	14.0
Total mining, excluding services to mining .....	..	408.7	63.8	84.3	164.8	264.4

(a) Australian Standard Industrial Classification 1978 edition.

**MINERAL COMMODITY STATISTICS**

Mineral commodity statistics published in the South Australian Year Book are those recorded by the Director-General of Mines and Energy.

**Mining and Quarrying Production, South Australia <sup>(a)</sup>**

Mineral	Unit of Quantity	Quantity		Value (b)	
		1982-83	1983-84	1982-83	1983-84
\$'000					
Metallic:					
Copper .....	'000 tonnes	16	16	20 319	15 489
Iron ore (c) .....	'000 tonnes	1 337	1 776	12 000	15 936
Other .....	..	..	..	2 368	4 849
Non-metallic:					
Barite .....	'000 tonnes	17	17	424	450
Coal (d) .....	'000 tonnes	1 435	1 269	44 339	43 160
Dolomite .....	'000 tonnes	483	570	1 544	2 001
Gypsum .....	'000 tonnes	992	1 002	2 782	3 102
Kaolin .....	'000 tonnes	13	5	380	302
Limestone .....	'000 tonnes	1 996	1 583	5 407	5 230
Opal (e) .....	..	..	..	30 662	30 103
Salt .....	'000 tonnes	713	670	2 627	2 445
Talc .....	'000 tonnes	18	17	710	796
Other .....	..	..	..	1 356	1 414
Construction material, quarrying .....	'000 tonnes	8 503	8 769	36 079	39 204
Natural sand products .....	'000 tonnes	2 383	2 426	9 770	12 117

Mining and Quarrying Production, South Australia <sup>(a)</sup> (continued)

Mineral	Unit of Quantity	Quantity		Value (b)	
		1982-83	1983-84	1982-83	1983-84
				\$'000	
Natural clay products .....	'000 tonnes	3 154	1 706	2 722	2 320
Natural gas (f) .....	millions of m <sup>3</sup>	4 440	4 489	162 915	194 742
Condensates .....	kilolitres	87 370	168 783	20 477	35 582
Crude oil .....	kilolitres	208 920	1 047 608	48 018	232 690
Total .....	..	..	..	404 899	641 930

(a) Quantities disposed of as recorded by the Department of Mines and Energy. (b) Ex-mine site. (c) Includes jaspilite. (d) Value of coal production was estimated by the Department of Mines and Energy. (e) Estimated. (f) Value at Moomba plant outlet.

Details of mining of individual minerals are given below. Reference should also be made to Part 1.3 which contains particulars of the location of mineral resources.

### Iron Ore

The only proved high grade iron ores of South Australia lie in the Middleback Ranges to the west of Whyalla. The ranges are composed primarily of iron-rich rocks containing local concentrations of high grade ore.

The Iron Monarch deposit near Iron Knob provided the bulk of the iron ore for Australia's steel industry for many years. Production from this and the Iron Baron area is maintained by the Broken Hill Proprietary Company Limited to service the local steel plant at Whyalla. Production in 1983-84 was 1.8 million tonnes.

### Copper

Copper mining was very important in the early days of the settlement of South Australia. The rich discoveries at Kapunda in 1842, Burra in 1845, and Wallaroo-Moonta in 1859-60 came at a time when the colony's development was stagnating and severe financial difficulties were being encountered. Many small copper mines, scattered throughout the central metalliferous areas, were also opened but most of the mines only lasted until the richer secondary copper cut out at depths mostly less than 150 metres.

From 1842 to 1923, when the great Wallaroo-Moonta mines closed, copper was by far the State's most important mining produce. The copper products accounted for over 80 per cent of the State's recorded mineral production (construction materials were not recorded and so not included). The copper products sold during this period contained 450 000 tonnes of copper metal and were worth \$33 million giving an average of \$72 per tonne of copper in the products.

During the next forty-five years (1924-1968), copper production was very small and intermittent with a production of only 5 600 tonnes of copper in the mineral products.

Renewed interest in copper during the 1960s led to the discovery of new, but lower grade, ore bodies at the old copper fields of Kanmantoo and Mount Gunson, and the working of remnant low-grade ore at Burra. These deposits were worked by open-cut methods which produced much larger tonnages than the underground methods used to produce most of South Australia's copper during the earlier period of copper mining.

During 1983-84 the Mount Gunson mine was the only copper mine in production, selling copper sulphide flotation concentrates to Japanese smelters. Poor ore grades and low copper prices are making the recovery of ore at Mount Gunson increasingly uneconomic.

### **Zinc**

In South Australia the only production of zinc comes from a high grade (about forty per cent zinc) deposit of zinc silicate found at Puttapa near Beltana in the Flinders Ranges. Several other smaller occurrences of this unusual zinc ore have been found in this part of the State but they are not being mined at present. The deposit is of high enough grade not to need concentration but is mined, crushed, and then sent to various markets in Europe, Africa and to Risdon in Tasmania with small amounts going direct to the Australian fertiliser industry for use as trace element supply for zinc deficient soils.

The plant at Puttapa has been placed on a care and maintenance basis with sales from stockpiles.

### **Barite**

There are widespread occurrences of barite (barytes) throughout the Adelaide System rocks of South Australia. Deposits are located in a number of areas including the Mount Lofty and Flinders Ranges and also the Olary district. Barite is used in the paint and other industries, but its main use is in drilling mud for oil exploration where the grade does not have to be so high. Production of barite totalled 16 578 tonnes in 1983-84.

The company operating the Oraparinna Mine in the Flinders Ranges is the major Australian producer of barite. In recent years it has been the main supplier of high grade ore for industrial use.

### **Gypsum**

South Australian deposits contain by far the largest part of Australian reserves of gypsum. The deposits in general have been formed in coastal basins cut off from the ocean, giving rise to extensive deposits of rock gypsum, the largest of these occurring at Lake MacDonnell. Other deposits are found at Lake Fowler, Cooke Plains and the Morgan-Blanchetown area. These deposits have been worked extensively over the past fifty years to provide the bulk of Australasian requirements for the plaster industry and for Portland cement manufacture. In 1983-84 production was in excess of one million tonnes.

Reserves of high grade gypsum at Lake MacDonnell have been proved by the Department of Mines and Energy to exceed 500 million tonnes, sufficient to meet Australasian requirements for the plaster industry and for portland cement for many years.

### **Salt**

The semi-arid climate and high evaporation rate along much of South Australia's coastline, together with the high salinity of the gulf waters, create very favourable conditions for the production of salt by solar evaporation. In the early days of settlement the availability of sites close to cheap transport led to the establishment of solar salt works at the head of Spencer Gulf near Port Augusta and at Whyalla, at Price on the eastern shore of Yorke Peninsula, and in 1940 at Dry Creek near Adelaide. In addition several operators recover salt from shallow salt-lakes on Yorke Peninsula and elsewhere.

There were 670 000 tonnes of salt produced in 1983-84. The industry in South Australia

is capable of expansion, but the future export market appears to have been largely captured by salt development in Western Australia.

### **Opal**

The estimated value of raw opal production in 1983-84 was \$30.1 million. In spite of the value of opal being won at present, individual mining operations at Coober Pedy, Andamooka and Mintabie are small. The distances from Port Augusta to Andamooka and from Port Augusta to Coober Pedy are 290 and 630 kilometres respectively. Mintabie is 340 kilometres north west of Coober Pedy.

Mining at all centres is relatively shallow, rarely exceeding thirty metres.

### **Talc**

The principal occurrences of talc are to be found at Mount Fitton in the northern Flinders Ranges and in the Gumeracha and Lyndoch districts. From these sources 17 000 tonnes were mined in 1983-84. The Mount Fitton talc is of a particularly high grade, and is in demand for use by the cosmetics industry. Lower grade material is used in the rubber, paint, and ceramics industries.

### **Coal**

South Australia is deficient in accessible bituminous coal resources and the only mining is of sub-bituminous coal at Leigh Creek. The present development of the field commenced with Department of Mines drilling operations in 1941. The Electricity Trust of South Australia assumed control of the field in 1948 and developed it as a source of fuel for the Port Augusta power station. Testing by the Department of Mines and Energy continued for some years, proving a total of 150 million tonnes of coal available by open-cut methods and a further 280 million tonnes of underground reserves. In excess of forty million tonnes has been mined to date by open-cut methods. Combined mining development of the Telford Basin at Leigh Creek required the relocation of Leigh Creek township and Leigh Creek South was completed in November 1981.

Coal production in 1983-84 was approximately 1.3 million tonnes. The entire production is railed to Port Augusta for use in power generation.

### **Oil and Natural Gas**

The three-year, \$1.5 billion Cooper Basin Liquids Project is now complete and was officially opened and declared operational on 5 September 1984. It is the largest onshore petroleum development in Australia.

The first shipment of 160 000 barrels of condensate was made in February 1983 and the first shipment of crude oil of 150 000 barrels was made in March 1983. The first domestic sale of liquid petroleum gas (LPG) was made in July 1984, and shortly thereafter the first overseas LPG shipment of 46 000 tonnes was sold to Japanese interests.

In 1983-84 natural gas sales were 4 489 million cubic metres valued at the Moomba plant outlet at \$194.7 million, a 1.1 per cent increase in volume but a 19.5 per cent increase in value of production over 1982-83.

### **Limestone and Dolomite**

The combined quantity of limestone and dolomite extracted for use in industry (*i.e.*, excluding roadstone, etc.) during 1983-84 was 2.2 million tonnes. The principal deposits include dolomite at Ardrossan for the steel industry; limestone at Penrice, near Angaston, for the chemical and cement industries; and limestone at Klein Point and Rapid Bay for the cement industry.

## Clay

South Australia possesses a wide variety of clays which are used for industrial purposes such as cement manufacture, building bricks and roofing tiles, refractory ware, pottery and ceramic purposes.

Because of the scarcity of local timber supplies, softwood excepted, much greater use is made of clay bricks for construction in South Australia than in other parts of Australia. The clay brick industry is concentrated near Adelaide. There are also widely distributed occurrences of special clays for ceramic and refractory ware.

The Department of Mines and Energy, together with the Australian Mineral Development Laboratories, is continually engaged in investigations relating to the usage of clay deposits encountered during geological surveys throughout the State.

In 1983-84 clay production totalled 1.7 million tonnes, valued at \$2.3 million.

## Construction Material Quarrying

Post-war industrial expansion, accompanied by extensive housing programs and highway construction, has resulted in a steadily increasing demand for construction materials. In 1983-84 production of aggregate, sand and roadstone (including all building stone) was 8.8 million tonnes valued at \$39.2 million.

The most significant of South Australian building stones is the Mount Gambier limestone which has been worked since the 1840s. Quarried as large ashlar, the stone is light, easily worked and is sufficiently durable for dwelling construction.

Wistow, Mintaro, Jones Hill and Willunga are sources of slate and flagstone, of which most is used as random (or crazy) paving, though smaller amounts are sawn as paving tiles.

Granite production is dominated by two varieties, black granite (or Norite) from Black Hill, north-east of Mannum and red granite from Calca near Streaky Bay. Most granite is used in monuments with smaller amounts in buildings.

Sandstone is worked at several locations in the Adelaide Hills. The largest producers have quarries at Carey Gully and Basket Range.

In 1983-84, 34 000 tonnes of dimension (building) stone valued at \$1 569 000 was quarried.

## MINERAL DEVELOPMENTS

In the Cooper Basin a total of eighteen gas fields and fourteen oil fields were in production by mid-1985. Most fields have preliminary treatment facilities plus a gathering system to bring all production into Moomba for central processing.

At Moomba the liquids recovery plant is now on stream, permitting the extraction of condensate from the sales gas stream and its transfer into the pipeline to the fractionation plant at Port Bonython.

A second pump station has been constructed on the Stony Point liquids pipeline, the communications system has been upgraded from that used on the Moomba-Adelaide natural gas pipeline, and a leak detection system has been installed and commissioned. Operation of the pipeline in the high vapour pressure mode has been authorised.

To provide for any possible future petrochemical development at Port Bonython or elsewhere, ethane is being stored by re-injection into a partially depleted gas zone in the Moomba Field. Should no petrochemical scheme eventuate, the ethane will be recovered and sold as part of the sales gas stream.

An enhanced recovery scheme to increase the potential for recovering oil from the Tirrawarra and Moorari fields is planned. At present gas is being reinjected into the Tirrawarra field only as a pilot to the main scheme, and some promising results in the form of increased production rates have been obtained.

At Stony Point, the liquids terminal includes an LPG fractionation plant, four crude oil/condensate storage tanks each of 250 000 barrels capacity, two refrigerated butane storage tanks each of 175 000 barrels capacity, two refrigerated propane storage tanks each of 250 000 barrels capacity, skim oil, ballast water and fire water storage tanks. Tankers berthed at the 2.4 kilometre jetty can be loaded at almost 5 000 tonnes per hour.

Feasibility studies and evaluation of the Olympic Dam copper-uranium-gold-silver deposit at Roxby Downs are proceeding. Underground developments totalling almost seven kilometres provide access from Whenan Shaft to the various ore types which have been delineated by drilling. These provide bulk samples for testing as well as sites for drilling stations underground and the opportunity for close study of mineralised blocks and enclosing rocks. The \$17 million pilot plant, with an ore feed throughput of five tonnes per hour, to yield copper concentrate and yellowcake product has been commissioned.

The Olympic Dam deposit, which has an areal extent of twenty square kilometres, has been tested by 550 surface drillholes and 350 underground drillholes to indicate ore reserves of at least 2 000 million tonnes averaging 1.6 per cent copper, 0.6 kg/tonne uranium oxide, 0.6 gm/tonne gold and 4 gm/tonne silver. A higher grade zone of 450 million tonnes, with a metal content of 2.5 per cent copper, has been indicated.

Future power generation in South Australia will require an increase in the use of coal. The Future Energy Action Committee has been established, with one of its purposes to examine coal field selection. Licensees of the Arkaringa (Wintinna), Kingston, Lochiel and Sedan deposits have been invited to submit proposals for economic and technical evaluation. A decision is expected by mid-1985.

### Other Developments

The Australian Mineral Development Laboratories (AMDEL) is an independent contracting organisation engaged in research, development, consulting and services for industry and government in the fields of minerals and materials both in Australia and overseas. The laboratories are established and operate as a statutory body under an Act of the South Australian Parliament. They function on a commercial basis relying entirely on earnings to provide the services offered. Operations are based in Adelaide (at Frewville and Thebarton) with branch laboratories located in Perth, Melbourne, Townsville, Sydney and Burnie.

At present AMDEL employs about 190 people in Adelaide within six major Divisions, these being; Analytical Chemistry, Operations, Mineral and Materials Sciences, Instrumentation, Consulting and Administration. A further forty people are employed at branch laboratories. The range of services offered includes chemical and mineral analysis, mineralogy, petrology, bench and pilot scale testing of ores, mineral separation, geochronology, gemmology, source rock and core analysis, fuel chemistry, mineral and chemical engineering, metallurgy, process design and control, plant evaluation and commissioning, materials science and engineering, mechanical testing, computer techniques, process instrumentation and control, environmental studies and occupational health monitoring. A range of high technology instrumentation developed by AMDEL is sold to customers worldwide. AMDEL's gross sales are approximately \$12 million annually.

The Australian Mineral Foundation has been established by the industries, institutions and departments concerned with minerals and petroleum. It is administered by a council representative of these groups.

The mining and petroleum industries are confronted with a rapid development in technology and a continual requirement for transmitting new information both to operating staff and to postgraduate students. The Foundation fills this communication need in several ways:

- (a) by providing short-term concentrated training courses for professional and other specialised staff;
- (b) through the media of symposia and conferences; and
- (c) through a specialised resource centre including a geoscience library and information service.

In addition an auditorium, seminar rooms, offices and extensive catering facilities are made available for conventions.

The Department of Mines and Energy spent approximately \$15.5 million in 1983-84 on geological and other investigations, drilling and mineral research work to assist the State's mineral industry.

The following table shows details of private mineral exploration, other than petroleum, in South Australia for 1982-83 and 1983-84.

**Private Mineral Exploration (Other than Petroleum)**  
**South Australia <sup>(a)</sup>**

Particulars	Unit	On Current Producing Leases		On Other Areas		Total Private Exploration	
		1982-83	1983-84	1982-83	1983-84	1982-83	1983-84
Depth drilled:							
Core .....	'000 m	3	2	79	70	82	72
Non-core .....	'000 m	2	2	144	77	146	79
Total .....	'000 m	5	4	223	147	227	151
Expenditure:							
Drilling:							
Core .....	\$'000	91	55	3 591	4 257	3 682	4 312
Non-core .....	\$'000	24	29	5 671	1 478	5 695	1 507
Total .....	\$'000	115	85	9 262	5 734	9 377	5 819
Other .....	\$'000	195	89	41 018	48 471	41 213	48 561
Total .....	\$'000	310	174	50 280	54 205	50 590	54 380

(a) Excludes exploration for water and all development work. Excludes details of exploration by business undertakings operated by State and local government authorities.

Details of private petroleum exploration and development for South Australia are shown in the following table for the years 1980 to 1983.

Private Petroleum Exploration and Development, South Australia <sup>(a)</sup>

Particulars	Unit	1980	1981	1982	1983
Wells drilled (b):					
Exploration .....	No.	10	25	28	25
Development .....	No.	6	16	47	25
Depth drilled:					
Exploration .....	'000 m	22.9	60.9	65.2	65.5
Development .....	'000 m	15.9	41.8	110.9	58.4
Expenditure:					
Private sources (c);					
Exploration .....	\$'000	17 519	51 696	72 947	54 153
Development .....	\$'000	39 610	67 586	123 269	120 567

(a) Source: Bureau of Mineral Resources, Geology and Geophysics.

(b) Number of wells reaching total depth during year.

(c) Includes payments under the *Petroleum Search Subsidy Act 1959*.

## FORESTRY

There are an estimated six million hectares of land classified as wooded in South Australia, but much of this is too small or scattered to be of current economic value for wood production or is better retained in its present form for environment protection reasons. Some 780 000 hectares carry forest or forest woodland, a decreasing part of which is still exploited for minor quantities of timber and fencing or firewood materials. Many of the forested or wooded areas are of considerable value for soil conservation, watershed protection, shelter, shade and conservation of indigenous plants and animals.

The plantation forest estate is of particular economic significance in South Australia, which because of climatic factors is very deficient in natural timber resources.

Of the State's forest reserve totalling 133 252 hectares, 59 390 hectares is currently under pine plantation (mainly *Pinus radiata*). It is estimated an additional 22 000 hectares are under plantation by private forestry organisations and individuals.

## Indigenous Forests

The natural forests of South Australia consist of eucalypt hardwoods restricted principally to the Mount Lofty Ranges, the lower Flinders Ranges, the southern portion of Eyre Peninsula, and the South East. A few species are of commercial value and these are used to a limited extent for the production of poles, posts, rails and sleepers.

Some areas of forest reserves not planted with conifers are maintained under native hardwoods but it is unlikely that further hardwood plantations will be established for timber purposes.

## Plantations

Seedlings raised in nurseries are planted out in the forest at densities of 1 700-2 200 trees to the hectare. A series of thinnings, starting when the trees are about twenty metres high, reduces density to about 150 trees to the hectare by about age forty. These thinnings are carried out on a commercial basis and make the major contribution to present timber and pulpwood output. The final felling age is aimed at forty to fifty years although for management purposes some earlier felling has been carried out in the past. Trees of the same age may vary in height; on some sites trees reach twenty metres after ten years of growth, but on other sites this may not be reached until after twenty years of growth.



**State Forests, South Australia <sup>(a)</sup>**  
**Area Planted During 1983 and Net Area of Plantations at 30 June 1984**

Location	Planted during 1983			Plantations at 30 June 1984		
	Softwoods		Hard-woods	Softwoods		Hard-woods
	<i>Pinus radiata</i>	Other <i>Pinus</i>		<i>Pinus radiata</i>	Other <i>Pinus</i>	
Hectares						
Northern Region:						
Bundaleer .....	—	—	—	1 363.9	31.6	196.5
Wirrabara .....	—	—	—	2 044.0	57.0	44.0
Other forests .....	—	—	—	—	—	146.5
Total Northern .....	—	—	—	3 407.9	88.6	387.0
Central Region:						
Mount Crawford .....	105.7	—	0.9	4 963.7	306.4	35.2
Kuitpo .....	51.6	—	—	1 090.8	267.1	112.2
Second Valley .....	45.9	—	—	1 989.3	175.1	12.4
Total Central .....	203.2	—	0.9	8 043.8	748.6	159.8
Riverland Region:						
Parilla .....	—	—	—	—	6.1	48.6
Total Riverland .....	—	—	—	—	6.1	48.6
South Eastern Region:						
Penola .....	548.0	0.2	—	5 019.4	503.7	1.2
Comaum .....	—	—	—	2 950.8	302.8	6.4
Mount Burr .....	523.9	—	—	2 090.6	30.6	76.8
Noolook .....	71.4	—	—	3 980.5	4.0	—
Mount Gambier .....	111.0	—	—	7 279.1	660.2	10.6
Kongorong .....	—	—	—	1 298.9	6.3	—
Tantanoola .....	115.2	—	—	7 931.4	950.3	6.3
Caroline .....	313.8	—	—	6 761.4	225.9	—
Myora .....	—	—	—	5 698.7	207.3	—
Cave Range .....	—	—	—	206.9	105.2	—
Total South East	1 683.3	0.2	—	43 217.7	2 996.3	101.3
Western Region:						
Wanilla .....	—	—	5.1	46.6	15.7	359.6
Waterworks reserves .....	—	—	—	936.4	126.7	3.6
Total State forests ...	1 886.5	0.2	6.0	55 652.4	3 982.0	1 059.9

(a) Source: South Australian Woods and Forests Department.

Extensive damage from bushfires in South Australia in February 1983 had a significant effect on the South Eastern and Central areas. Overall, 23 per cent of South Australian plantations were lost in the bushfires. Salvage efforts recovered over two million cubic metres of burnt log. Half of this total was placed in water storage to supply the conversion industry for a five year period. Re-establishment of the burnt plantation areas by the South Australian Woods and Forests Department has been proceeding at a rate of around 2 000 hectares per year.

The majority of the planted forest is in the Lower South East. The 625 mm rainfall line roughly divides the South East in two; the Lower South East, with an annual rainfall in excess of 625 mm is quite suitable for commercial forestry, but the Upper South East is not.

## FOREST ADMINISTRATION

### State Forests

State forests are administered by the Woods and Forests Department which is responsible for the establishment, maintenance and exploitation of State forests, including the management of forest reserves and operation of mills for processing timber produced by those forests. The Forest Reserves are organised into Districts and are under the charge of professionally trained foresters. The Department is also the major timber producer in South Australia, and operates three sawmills and two wood preservation plants through its Commercial Division.

In earlier years, when large areas of plantations were being established, expenditure by the Department exceeded revenue, but since 1942-43 the revenue has exceeded expenditure including depreciation and interest on loans. By 1954-55 accumulated surpluses had matched expenditure on establishment and maintenance of plantations, and annual surpluses of the Department are now paid to Consolidated Revenue.

Funds employed by the Woods and Forests Department, including its milling operations, amounted to \$111 455 000 at 30 June 1984 of which \$29 346 000 was timber and land at net cost. The present value of State-owned pine forests is approximately \$237 million at current royalty rates.

## PRODUCTION

Log production is met from final felling and thinning operations, and planned forest management ensures that the amount of timber cut each year does not exceed new growth.

The logging system used is from stump direct to mill. The Woods and Forests Department also supplies logs to private processing plants in South Australia.

Softwood Holdings Ltd and Southern Australia Perpetual Forests Ltd (SAPFOR) are two major wood processors based in the South East region of South Australia.

Softwood Holdings operates the only particleboard plants in South Australia and its four sawmills have been progressively updated. SAPFOR operates a mill at Tarpeena near Mount Gambier.

Log production includes volumes for Departmental sawmills and private industry deliveries. Total volumes include logs for sawlog, preservation, peeler log and pulpwood. Figures for 1982-83 and 1983-84 include 349 843 cubic metres and 942 838 cubic metres respectively placed into water storage.

The following table gives the quantity of forest logs produced during the years 1979-80 to 1983-84.

Forest Log Production, South Australia <sup>(a)</sup>

Year	Softwood
	Cubic metres
1979-80 .....	889 936
1980-81 .....	832 763
1981-82 .....	788 416
1982-83 .....	1 245 259
1983-84 .....	2 006 371

(a) Source: South Australian Woods and Forests Department.

Production of Sawn Wood, South Australia <sup>(a)</sup>

Year	Cubic Metres	Proportion of Australian total (Per cent)
1978-79 .....	252 974	8.6
1979-80 .....	283 996	8.9
1980-81 .....	300 142	9.0
1981-82 .....	305 145	9.7
1982-83 .....	329 861	12.6

(a) Includes sawn equivalent of plywood and veneer, but excludes railway sleepers.  
Source: Department of Primary Industry.

## EMPLOYMENT

The number of employees directly employed by the Woods and Forests Department was 1 548 at 30 June 1984, and included approximately 950 people employed directly in milling activities.

## RESEARCH AND ADVISORY SERVICES

The virtual dependence of the South Australian forestry industry on a single species necessitates continued research into the maintenance and improvement of *Pinus radiata* resources, as well as into forestry in general.

The Woods and Forests Department maintains its own research facilities and works very closely with the South Australian Regional Station of the Division of Forest Research of the Commonwealth Scientific and Industrial Research Organization (CSIRO) at Mount Gambier. Certain aspects of forestry research are also undertaken by the Soils Division of CSIRO, the Waite Agricultural Research Institute, the University of Adelaide, the Flinders University and the Department of Forestry of the Australian National University.

Joint research is being carried out into tree breeding through the Southern Tree Breeding Association.

Members of the Association are the Woods and Forests Department, SAPFOR, Softwood Holdings Ltd and the CSIRO Division of Forest Research.

The Association is producing seed of improved quality to grow seedlings for planting in South East forest areas.

Research activities aimed at an expansion of forestry production include the development of fertiliser use, both to stimulate growth and to bring into production land previously considered unsuitable, and the improvement of planting stock through selective breeding. Silvicultural research is concerned with the maintenance of soil fertility and with combating various diseases and pests. Permanent sample plots are maintained in departmental forests for research into various aspects of forest yield and management.

The Woods and Forests Department provides an advisory service in arboriculture and distributes, through its nurseries at Murray Bridge, Belair, Cavan, Berri and Bundaleer a wide variety of trees suitable for planting in various climatic and soil conditions.

### FOREST PROTECTION

The hot dry summer conditions normal to the State require forest management to take considerable precautions and to maintain constant vigilance against forest fire. The clearing of undergrowth, the maintenance of fire-breaks, the staffing of observation towers and the constant readiness of fire fighting units are all an integral part of forestry practice.

Other protective measures include spraying to prevent plant disorders, measures to control insect pests in the forest, and the eradication of the various weeds and pests which threaten young plants.

Since the discovery of the *Sirex* wood wasp in Victorian forests in 1961 constant watch has been maintained for any sign of this pest in South Australian pine forests, and the State has contributed to development of biological control measures.

### FISHERIES

Commercial fishing is undertaken along the entire South Australian coastline. In the sheltered waters of the Gulfs, the Coorong and the West Coast bays, operators take prawns or various scale fish species, while in offshore waters, tuna and shark are sought. Rock lobster is taken along the more exposed parts of the coast, while abalone is dived for in most areas. A smaller quantity of freshwater fish is caught in the River Murray and associated lakes.

The most commercially valuable species are prawns and rock lobster, with tuna, abalone, shark and whiting also making significant contributions. The general marine scale fishery supports the greatest number of fishermen, both amateur and professional. The total value of fisheries produce landed commercially in South Australia in 1983-84 was \$59 million.

### FISHING VESSELS AND COMMERCIAL PARTICIPATION

A wide range of vessels operate in the commercial fishing industry. The majority of fishermen in the general marine scale and inland waters fleets operate from vessels of seven metres length or less. Fibreglass, timber and plywood are popular hull materials in these fisheries, with aluminium having widespread use in the inland waters fisheries. Abalone divers generally operate from small aluminium or fibreglass boats of five to seven metres in length. Vessels in the tuna and prawn fisheries have hulls constructed mainly from timber or steel. Most tuna vessels range from twelve to thirty metres in length, whilst the majority of prawn trawlers are thirteen to twenty-one metres in length. Rock lobster fishermen generally operate from timber, plywood or fibreglass vessels of six to fifteen metres in length.

There were 1 286 licensed fishermen operating in South Australian waters at 30 June 1984. The number of licence holders in each of the fisheries was; general marine 695,

rock lobster 348, prawn 53, tuna 45, Lakes and Coorong 49, Reach (River Murray) 43, abalone 35 and miscellaneous 18. In addition, there is an average of one employee fisherman engaged in the industry for each licensed fishing operation, although the number of employees on each vessel varies according to the fishing operation.

### ADMINISTRATION

The exploitation of fish resources adjacent to South Australia is controlled by three Acts, the South Australian Fisheries Act, 1971-1984, the Commonwealth *Fisheries Act 1952* and the *Continental Shelf (Living and Natural Resources) Act 1968*. A new State Fisheries Act was proclaimed and regulations gazetted during 1984.

Under the State Act, which is administered by the Department of Fisheries, provision is made for the licensing of fishermen and the registration of boats and gear. Control of fishing activity is maintained by licensing, zoning and seasonal closures, the establishment of size limits, bag limits and closed areas, the regulation of amount and type of gear, the prohibition of the use of explosive or noxious substances in any waters and the establishment of aquatic reserves. Controls of this nature are considered necessary for the orderly and efficient use of fish resources, which are in effect 'common property' resources.

### PRODUCTION

#### Finfish

The major marine species of finfish taken in South Australian waters are tuna, shark, Australian salmon, whiting, garfish and snapper. The catches of these and other significant commercial species are given in the following table.

**Finfish: Production by Species, South Australia**  
**Estimated Live Weight**

Species	1979-80	1980-81	1981-82	1982-83	1983-84
'000 kg					
Marine:					
Australian salmon .....	702	683	608	1 028	426
Bream (black) .....	73	76	55	46	68
Garfish .....	463	491	652	454	436
Leatherjacket .....	14	17	25	24	53
Mullet .....	282	336	411	257	201
Mulloway .....	52	45	34	38	46
Ruff .....	316	337	312	399	414
Shark .....	1 098	1 505	1 624	1 311	1 472
Short finned pike .....	147	128	121	103	109
Snapper .....	362	308	311	397	466
Tuna .....	7 180	9 680	14 825	13 910	10 619
Whiting .....	795	975	894	826	838
Other marine species .....	109	147	97	97	168
Total .....	11 593	14 728	19 969	18 891	15 316

**Finfish: Production by Species, South Australia**  
**Estimated Live Weight (continued)**

Species	1979-80	1980-81	1981-82	1982-83	1983-84
	'000 kg				
<b>Freshwater:</b>					
Golden perch (callop) .....	72	49	147	98	174
Murray cod .....	10	10	21	6	8
Bony bream .....	273	271	579	604	716
European carp .....	443	371	591	483	558
Other freshwater species .....	15	15	15	17	28
<b>Total .....</b>	<b>812</b>	<b>716</b>	<b>1 352</b>	<b>1 207</b>	<b>1 484</b>
<b>Total finfish production .....</b>	<b>12 405</b>	<b>15 444</b>	<b>21 321</b>	<b>20 098</b>	<b>16 800</b>

Tuna are taken in the waters west and south of Eyre Peninsula and Kangaroo Island. Occasional catches are taken beyond the continental shelf. Although other methods have been attempted, the main techniques for taking tuna are pole fishing with live bait and purse-seining. The use of spotting aircraft has increased the efficiency of fishing operations. Most tuna are landed at Port Lincoln or Streaky Bay although occasional landings have been made at Port Adelaide.

Shark fishing extends from the Victorian border in the east to Fowlers Bay in the far west. The main ports of landing are Port Lincoln, Robe, Thevenard/Ceduna, Victor Harbor, Port Adelaide and the South East rock lobster ports. The two most important species, namely school and gummy sharks, are mainly taken with large mesh gill nets and, to a lesser extent, with long-lines.

Operators using purse-seine nets take Australian salmon in waters adjacent to the moderately exposed coastline of southern Yorke and Eyre Peninsulas, Kangaroo Island and the West Coast. The main species of whiting taken is King George whiting which is captured commercially in Spencer and St Vincent Gulfs, Investigator Strait and the West Coast bays. In many areas hand-lining continues to provide profitable catches as this fish attracts a high price. In the inshore waters of the gulfs and certain bays along the West Coast, large quantities of whiting and garfish are taken using hauling nets. Of the other species, mullet, black bream and snapper are regarded highly as table fish. Mullet and black bream are netted mainly in the Coorong and waters adjacent to the River Murray Mouth area.

Snapper are mainly taken by hand-line throughout State waters, with relatively small catches being made by long-lines and netting in the northern waters of both gulfs.

The River Murray, Lakes area and Coorong are the only commercial sources of fresh water fish in the State because of the general lack of permanent streams and lakes. The River Murray has been sectioned into 'reaches' and 'reserves' for fishing purposes and each commercial river fisherman is issued with a permit to fish a separate reach.

Gross value of production of the major marine species is shown in the following table.

**Finfish: Production by Marine Species, South Australia**  
**Gross Value of Production**

Species	1979-80	1980-81	1981-82	1982-83	1983-84
			\$'000		
Tuna .....	5 960	8 470	8 863	8 972	8 177
Whiting .....	2 800	3 512	3 410	4 169	3 919
Snapper .....	562	530	650	797	1 010
Garfish .....	848	800	1 063	1 040	1 205
Australian salmon .....	351	383	261	432	311
Shark .....	985	1 629	1 710	1 411	2 059
All other .....	914	1 009	1 009	998	930
<b>Total .....</b>	<b>12 420</b>	<b>16 333</b>	<b>16 967</b>	<b>17 820</b>	<b>17 611</b>

**Crustaceans**

Prawn trawling is undertaken in Spencer and St Vincent Gulfs, Investigator Strait and on the West Coast of the State. Management of the prawn fisheries has been greatly enhanced by the adoption of permanent and seasonal closures designed to protect small and reproducing prawns. This in turn, maximises the value of the catch by directing fishing to periods when prawns are larger and of higher quality.

**Prawn Production, South Australia**

Particulars	1979-80	1980-81	1981-82	1982-83	1983-84
Estimated gross weight .... ('000 kg)	2 445	2 395	3 096	3 029	2 799
Value ..... (\$'000)	10 264	10 840	13 709	20 890	17 460

Pots by which Southern rock lobster are taken are positioned from the shore to the edge of the continental shelf. The south-east coast between Kingston and the Victorian border is the main fishing area. Good catches are also taken from grounds around Kangaroo Island, near Althorpe Islands and Port Lincoln, and along the West Coast.

To prevent over exploitation, both the rock lobster and prawn fisheries are 'limited entry' fisheries with constraints being placed on the number and size of vessels that may fish and the type or number of units of gear that may be used.

**Rock Lobster Production, South Australia**

Particulars	1979-80	1980-81	1981-82	1982-83	1983-84
Estimated gross weight .... ('000 kg)	1 971	2 810	2 720	2 572	2 412
Value ..... (\$'000)	9 410	15 304	16 294	17 291	17 029

Although prawns and rock lobsters are the principal species of crustaceans fished in South Australia, there has been a recent increase in commercial fishing for crabs. The main species taken are blue and sand crabs.

### Molluscs

Abalone is by far the most important mollusc taken in South Australia and is found in greatest numbers at depths of 12 to 30 metres on the extensive limestone bottom off the shores of western Eyre Peninsula. Smaller numbers are taken in Spencer Gulf, around Kangaroo Island and off the South East coast. The two species exploited are greenlip and blacklip.

The abalone fishery is also subject to licence limitation with each diver required to have an authority to take abalone on his commercial fishing licence.

**Abalone Production, South Australia**

Particulars	1979-80	1980-81	1981-82	1982-83	1983-84
Gross (in shell) weight ..... ('000 kg)	795	938	1 036	997	1 136
Value ..... (\$'000)	2 148	3 283	3 546	3 538	4 419

Other molluscs taken in South Australian waters include squid (valued at \$420 000 in 1983-84), cockles (\$188 000) and octopus (\$114 000). In addition, experiments have been made in the culture of Pacific oysters at Dry Creek, and there is a commercial oyster farm at Coffin Bay.

### MARKETING AND PROCESSING

Marketing and processing arrangements vary according to the species. Traditionally, most of the tuna landed in South Australia is canned (not necessarily in South Australia) for domestic consumption. Surplus tuna is normally exported in whole frozen form. Southern rock lobster are tailed and frozen for export at most of the main ports, but some are cooked for local consumption. Some prawns are cooked and sold locally but most are frozen and exported. Abalone are either canned or frozen for export. Shark are gutted and headed at sea and are frozen at the port of landing for interstate markets. Other fish are generally iced for dispatch to the Adelaide market or are scaled, filleted and frozen for general distribution. A proportion of the prime species landed in South Australia are sold and consumed in Australian east coast markets.

All of the main landing ports have chilling or freezing facilities and many have processing plants. Several of these are operated by individual buyers or co-operatives, the largest of the latter being SAFCOL Holdings Limited. In addition to collecting, processing and distributing fish from the outports, SAFCOL also operates the Adelaide fish market. This is an auction market which markets fish for both members and non-members.

### RESEARCH

Continuing research is important for effective fisheries management. The State Fisheries Department conducts rock lobster, prawn, yabbie, blue crab, Australian salmon, abalone, freshwater fish, squid, whiting, snapper and oyster research programs including tagging, stock sampling, and market measuring. The Department also undertakes research into aspects of its fisheries management programs.



To encourage fisheries research, the Commonwealth and State Governments established a joint fisheries Research and Development Fund in 1966 while the Commonwealth Government established the Fishing Industry Research Trust Account in 1969. The latter makes available from Commonwealth Government revenue an amount equal to that collected from the fishing industry by the State fisheries authorities and is used to finance worthwhile research projects.

### Conservation

The importance of protecting the marine and freshwater environment against pollution and other man-caused degradation is recognised in Section 48 of the Fisheries Act, 1982 which enables the Governor to make regulations for regulating or prohibiting the discharge, placing or flow into waters of any matter (whether solid, liquid or gaseous) declared by the regulations to be poisonous or injurious to fish or their spawn, and generally for protecting fish and their spawn against destruction or injury by the discharge, placing or flow of any such matter into waters.

The State Department of Fisheries has pioneered, in Australia, the concept of marine national parks and has created twelve aquatic reserves with a total area of 14 790 hectares. Seal colonies, mangrove communities and areas of scientific and educational interest have been protected. Mangrove communities and allied samphire flats have received particular attention because of their recognised contribution to the productivity of the near-shore marine environment. All mangroves in South Australia are fully protected.

### RECREATIONAL FISHING

Recreational fishing in South Australia is an important leisure activity which has a real value not readily measured by the quantity of fish caught. The management of fish resources takes this aspect into account. An indication of the level of participation in recreational fishing in South Australia was provided by a 1982 survey of leisure activities in the State. The first quarter period of the survey indicated that almost 290 000 South Australians 10 years of age and over undertook some form of recreational fishing during the warmer months of the year.

## 9.3 MANUFACTURING

### DEVELOPMENT

A highlight in the industrial progress of the State was the establishment at Port Pirie in 1889 of smelters for the processing of silver-lead ore from Broken Hill. This was primarily responsible for building up of Port Pirie's population from about 900 at the 1881 Census to some 8 000 twenty years later, making the town at that time the largest country centre in South Australia.

Extensive development has occurred particularly in the consumer durable industries (e.g. motor vehicles, electrical and household appliances) and these industries now employ a significant proportion of the State's labour force. Major improvements also have been made in the State's energy sources with the development of the Port Augusta and Torrens Island Power Stations and the Port Stanvac Oil Refinery, and the introduction of natural gas as a fuel.

## ASSISTANCE TO INDUSTRY

**Department of State Development**

The Department of State Development assists and encourages firms to locate or expand their operations in South Australia. It has a co-ordinating function aimed at increasing and sustaining job opportunities and works in close co-operation with the various State Departments involved in development matters including Marine and Harbors, Mines and Energy, Woods and Forests, Agriculture, and Fisheries.

The aims of the Department are to:

- (a) develop and strengthen the State's economic base;
- (b) assist the expansion and development of existing industries;
- (c) attract new industry;
- (d) expand interstate and overseas trade; and
- (e) encourage regional development of business activity.

The Department locates potential investors and negotiates to secure development projects for the State. It administers the Government's financial incentive schemes and promotes the State both interstate and overseas. General assistance is provided to industry including management and financial advice on specific problems. The Department provides communication and liaison between industry and government.

**Small Business Corporation of South Australia**

This statutory corporation was established in 1984 to replace the Small Business Advisory Bureau. It offers free counselling, advice and information to the owners and managers of small businesses, including persons starting a new business.

**Technology Park Adelaide**

Technology Park Adelaide is Australia's first comprehensively planned centre for scientific research and high technology manufacturing. The Park promotes an environment conducive to research and development. It is located thirteen kilometres north of Adelaide adjacent to the Levels Campus of the South Australian Institute of Technology.

**Other Assistance**

Other specific forms of financial assistance made available to industry by the State Government include payroll tax rebates, establishment grants, consultancy grants, export bridging finance and assistance in the provision of services. Serviced land is available in government industrial estates. Factories may be constructed through the South Australian Housing Trust either for sale or under agreed financial arrangements. Assistance may also be given through government representations located in the United Kingdom, Hong Kong, Japan, Singapore and the Philippines.

## MANUFACTURING INDUSTRY STATISTICS

For the year ended June 1969, the Censuses of Manufacturing and Electricity and Gas Establishments were conducted for the first time on an integrated basis with Censuses of Mining, Retail Trade and Selected Services, and Wholesale Trade. The electricity and gas industries, which were previously included in the Annual Factory Census, were the subject of separate censuses in 1968-69. As well as this change in the method of obtaining information on economic activities, different criteria have been used to define manufacturing and this has resulted in a significant fall in the number of establishments. In

particular, service establishments such as dry cleaners and motor repair workshops are no longer classified as manufacturing. In addition to the changes in industry classification, information is now collected for all activities (including such things as installation work or wholesaling) undertaken by manufacturing establishments.

Thus, manufacturing industry statistics collected for the 1968-69 Census and subsequent censuses are not comparable with figures obtained from previous censuses. A more detailed explanation of these changes was included on pages 440-4 of the *South Australian Year Book* 1972.

Also, from 1974-75, detailed statistics have not been collected from single establishment enterprises employing fewer than four persons as their contribution to statistical aggregates other than the number of establishments is only marginal. In 1981-82 there were 1 002 establishments employing fewer than four persons.

### LEGISLATION

Industrial legislation is dealt with in Part 7 Labour. Other legislation is concerned with the location of factory premises and with the processes carried out therein.

Under the Local Government Act, 1934-1985, local government authorities may make by-laws restricting the erection of factory premises to certain sections of the area under their jurisdiction. The Manufacturing Industries Protection Act, 1937, provides for the proclamation of certain areas wherein proprietors and occupiers of factories are protected against civil action for noise and vibration problems. This Act, which takes precedence over zoning by-laws, currently applies to four relatively small zones. Regulations made under the Noxious Trades Act, 1943-1965, have defined certain processes as noxious trades for which a licence must be obtained. In addition an area between Wingfield and Dry Creek in the northern suburbs has been declared a noxious trade area with persons operating therein being protected from civil action.

Similarly the licensing of noisy trades may be required under a section of the Local Government Act. Excessive noise from industrial premises is regulated under the Noise Control Act, 1976-1977. Protection against health hazards is provided under the Health Act, 1935-1984.

### CLASSIFICATION OF MANUFACTURING ESTABLISHMENTS

The Australian Standard Industrial Classification (ASIC) described in the publication *Australian Standard Industrial Classification, Volume 1* (Catalogue No. 1201.0) classifies industries in the economy for statistical purposes, thus permitting the scope of the different economic censuses to be specified without overlapping or gaps between them.

As from the 1977-78 Census, statistics of manufacturing establishments are based on the 1978 Edition of the Classification.

### STRUCTURE AND LOCATION OF SECONDARY INDUSTRY

To a considerable extent, industrialisation since the 1939-45 War, has evolved around three major industrial groups. The motor vehicle, the electrical goods and the household appliance industries, together with their peripheral suppliers of components and services, have accounted for much of the post-war expansion. These industries are located in, or near Adelaide. In fact the tendency for manufacturing industries, particularly those supplying consumer goods, to congregate near their market, has resulted in a heavy concentration of South Australian secondary industries in or near Adelaide.

The following tables based on the 1978 Edition of ASIC show this concentration of manufacturing activity in the Adelaide Statistical Division (ASD).

# **Manufacturing Establishments: Summary of Operations, Adelaide Statistical Division and South Australia, 1982-83**

(Note: Excludes single establishment enterprises with fewer than four persons employed.)

Item	Unit	Adelaide Statistical Division	South Australia	ASD as percentage of SA
Establishments at 30 June .....	number	1 687	2 099	80
Average employment:				
Males .....	number	58 746	74 843	78
Females .....	number	17 294	21 063	82
Wages and salaries .....	\$'000	1 186 786	1 502 324	79
Turnover .....	\$'000	5 017 697	6 707 520	75
Value added .....	\$'000	2 141 024	2 708 629	79

## **Manufacturing Establishments: Summary of Manufacturing Operations by Statistical Division, 1982-83**

(Note: Excludes single establishment enterprises with fewer than four persons employed.)

Statistical Division	Establishments at 30 June	Average Employment	Wages and Salaries	Turnover	Value Added
	Number			\$'000	
Adelaide .....	1 687	76 040	1 186 786	5 017 697	2 141 024
Outer Adelaide .....	119	3 730	49 645	344 581	125 661
Yorke and Lower North .....	41	802	9 374	67 054	20 458
Murray Lands .....	75	2 701	40 573	295 865	91 244
South East .....	85	4 556	69 107	321 702	112 665
Eyre .....	33	667	8 902	59 133	19 372
Northern .....	59	7 410	137 937	601 488	198 206
<b>Total State .....</b>	<b>2 099</b>	<b>95 906</b>	<b>1 502 324</b>	<b>6 707 520</b>	<b>2 708 629</b>

Generally, industrial plants outside the Adelaide Statistical Division are located near the sources of supply of raw materials. These include the sawmills and paper pulp industries of the South East, the fruit processing plants of the Riverland, the wineries and distilleries of the Barossa Valley and the Riverland, and various dairy produce, meat slaughtering, fish processing and cement manufacturing plants. The two most important manufacturing undertakings beyond the vicinity of Adelaide are the iron and steel complex at Whyalla and the silver-lead-zinc smelters at Port Pirie. The sites of these undertakings together with the power station at Port Augusta are related to the location of mineral resources.

There are exceptions, where industrial plants are not located near their sources of raw materials. These include an agricultural machinery plant at Mannum, a woollen mill at Lobethal, clothing production at Mount Gambier and heavy engineering at Whyalla. Wallaroo and Port Lincoln, being central to their markets, are the sites of chemical fertiliser production.

The Cooper Basin in the north-east corner of the State is of immense significance for South Australia, with its natural gas, crude oil and condensate production. Natural gas is piped to Adelaide and some rural areas, and the Sydney-Newcastle-Canberra regions. Crude oil and condensate have been piped to Port Bonython (Stony Point) for storage and shipment from February 1983, and liquid petroleum gases have been shipped since late 1984 (for more details refer page 405, Mineral Developments).

A summary of manufacturing operations by industry subdivision within the Adelaide Statistical Division is detailed below and the distribution of activity between this Division and the rest of the State can be seen by comparing this and the subsequent table.

**Manufacturing Establishments: Summary of Operations by Industry Subdivision**  
**Adelaide Statistical Division, 1982-83**

(Note: Excludes single establishment enterprises with fewer than four persons employed.)

Industry Subdivision	Establishments at 30 June	Average Employment	Wages and Salaries	Turnover	Value Added
	Number			\$'000	
Food, beverages and tobacco .....	178	9 636	136 649	829 779	320 544
Textiles .....	34	n.p.	n.p.	n.p.	n.p.
Clothing and footwear .....	81	3 860	43 880	154 797	82 485
Wood, wood products and furniture .....	256	4 691	60 513	260 707	98 244
Paper, paper products, printing and publishing .....	159	6 155	92 222	323 044	162 563
Chemical, petroleum and coal products .....	43	2 353	46 136	252 050	103 082
Non-metallic mineral products .....	86	2 742	47 244	255 224	116 013
Basic metal products .....	33	n.p.	n.p.	n.p.	n.p.
Fabricated metal products .....	283	6 581	94 136	412 177	161 352
Transport equipment .....	102	n.p.	n.p.	n.p.	n.p.
Other machinery and equipment .....	267	13 194	204 930	740 713	309 189
Miscellaneous manufacturing .....	165	5 454	80 738	325 390	144 787
<b>Total manufacturing .....</b>	<b>1 687</b>	<b>76 040</b>	<b>1 186 786</b>	<b>5 017 697</b>	<b>2 141 024</b>

**Manufacturing Establishments: Summary of Operations by Industry Subdivision**  
**South Australia, 1982-83**

(Note: Excludes single establishment enterprises with fewer than four persons employed.)

Industry Subdivision	Establishments at 30 June	Average Employment	Wages and Salaries	Turnover	Value Added
	Number			\$'000	
Food, beverages and tobacco .....	360	16 818	234 882	1 562 905	547 412
Textiles .....	39	2 672	37 776	166 511	56 798
Clothing and footwear .....	85	4 070	46 032	159 400	85 681
Wood, wood products and furniture .....	297	7 014	92 655	397 738	149 284
Paper, paper products, printing and publishing .....	196	7 528	117 124	423 543	206 875
Chemical, petroleum and coal products .....	48	2 589	50 038	292 244	115 992
Non-metallic mineral products .....	129	3 159	54 340	302 794	135 879
Basic metal products .....	36	8 236	155 307	688 358	214 392
Fabricated metal products .....	327	7 166	102 604	451 036	176 363
Transport equipment .....	114	17 383	317 495	1 165 732	551 562
Other machinery and equipment .....	296	13 770	212 811	768 278	322 442
Miscellaneous manufacturing .....	172	5 501	81 259	328 981	145 948
<b>Total manufacturing .....</b>	<b>2 099</b>	<b>95 906</b>	<b>1 502 324</b>	<b>6 707 520</b>	<b>2 708 629</b>

The number of manufacturing establishments employing four or more persons decreased from 2 219 in 1981-82, to 2 099 in 1982-83, a drop of over 5 per cent. Employment also fell from 104 874 in 1981-82 to 95 906 in 1982-83, a drop of almost 9 per cent. Employment dropped in all industry groups.

The importance of manufacturing industry in South Australia relative to Australia as a whole can be gauged from the following comparison.

**Manufacturing Establishments: Summary of Operations, South Australia and Australia  
1982-83**

(Note: Excludes single establishment enterprises with fewer than four persons employed.)

Item	Unit	South Australia	Australia	South Australia as a percentage of Australia
Establishments at 30 June .....	number	2 099	27 696	7.6
Average employment:				
Males .....	number	74 843	787 309	9.5
Females .....	number	21 063	265 596	7.9
Wages and salaries .....	\$'000	1 502 324	17 402 738	8.6
Turnover .....	\$'000	6 707 520	82 320 627	8.1
Stocks, closing .....	\$'000	1 170 851	13 058 707	9.0
Value added .....	\$'000	2 708 629	31 059 149	8.7
Fixed capital expenditure .....	\$'000	219 653	3 678 351	6.0

Although there were 2 099 establishments operating at 30 June 1983 only 181 or 8.6 per cent had an employment in excess of 100 persons while 921 establishments, or 43.9 per cent of the total, employed less than 10 persons. The 24 largest establishments employed 27 565 persons or 30.9 per cent of the total.

In the following table manufacturing establishments are grouped according to the number of persons employed.

**Manufacturing Establishments: Selected Variables by Size of Establishment  
South Australia, 30 June 1983**

(Note: Excludes single establishment enterprises with fewer than four persons employed.)

Size of Establishment (Average Employment)	Establish- ments	Persons Employed	Turnover	Value Added
		Number		\$'000
Fewer than 10 .....	921	5 340	298 372	113 258
10 but fewer than 20 .....	466	6 170	395 183	150 184
20 but fewer than 50 .....	374	11 274	828 573	316 062
50 but fewer than 100 .....	157	10 690	815 640	297 619
100 but fewer than 200 .....	105	14 053	1 092 513	434 918
200 but fewer than 500 .....	52	14 165	1 080 645	435 727
500 or more .....	24	27 565	2 136 864	948 211

Details of persons employed and distribution of employment in manufacturing establishments for 1982-83 are given in the following tables. Females constituted 22.0 per cent of the total employment, but industries traditionally associated with female employment had a much higher component; textiles, clothing and footwear industries, in particular, employ a high proportion of females.

**Manufacturing Establishments: Average Employment, South Australia 1982-83**

(Note: Excludes single establishment enterprises with fewer than four persons employed.)

Industry Subdivision	Males	Females	Persons	Percentage of Total Employment
Food, beverages and tobacco .....	11 909	4 909	16 818	17.5
Textiles .....	1 507	1 165	2 672	2.8
Clothing and footwear .....	1 114	2 956	4 070	4.2
Wood, wood products and furniture .....	5 999	1 015	7 014	7.3
Paper, paper products, printing and publishing .....	5 505	2 023	7 528	7.8
Chemical, petroleum and coal products ....	2 208	381	2 589	2.7
Non-metallic mineral products .....	2 878	281	3 159	3.3
Basic metal products .....	7 645	591	8 236	8.6
Fabricated metal products .....	5 952	1 214	7 166	7.5
Transport equipment .....	15 831	1 552	17 383	18.1
Other machinery and equipment .....	10 511	3 259	13 770	14.4
Miscellaneous manufacturing .....	3 784	1 717	5 501	5.7
<b>Total manufacturing .....</b>	<b>74 843</b>	<b>21 063</b>	<b>95 906</b>	<b>100.0</b>

**Manufacturing Establishments: Average Employment by Type of Employment  
South Australia, 1982-83**

(Note: Excludes single establishment enterprises with fewer than four persons employed.)

Industry Subdivision	Working Proprietors	Employees	Total
Food, beverages and tobacco .....	184	16 634	16 818
Textiles .....	14	2 658	2 672
Clothing and footwear .....	37	4 033	4 070
Wood, wood products and furniture .....	217	6 797	7 014
Paper, paper products, printing and publishing .....	97	7 431	7 528
Chemical, petroleum and coal products .....	—	2 589	2 589
Non-metallic mineral products .....	29	3 130	3 159
Basic metal products .....	4	8 232	8 236
Fabricated metal products .....	109	7 057	7 166
Transport equipment .....	46	17 337	17 383
Other machinery and equipment .....	81	13 689	13 770
Miscellaneous manufacturing .....	65	5 436	5 501
<b>Total manufacturing .....</b>	<b>883</b>	<b>95 023</b>	<b>95 906</b>

## WAGES AND SALARIES

The following table shows wages and salaries paid classified by industry subdivision based on 1978 Edition of ASIC. The proportion of wages and salaries paid to administrative, office, sales and distribution employees (as opposed to production and all other workers) varies markedly between industry subdivisions, ranging from 19 per cent of total wages paid in the clothing and footwear subdivision to 40 per cent in the chemical, petroleum and coal products subdivisions. The average for total manufacturing was 28 per cent.

**Manufacturing Establishments: Wages and Salaries, South Australia, 1982-83**

(Note: Excludes single establishment enterprises with fewer than four persons employed.)

Industry Subdivision	Wages and Salaries Paid to		
	Administrative, Office, Sales and Distribution Employees	Production and All Other Workers	All Employees
		\$'000	
Food, beverages and tobacco .....	68 038	166 843	234 882
Textiles .....	9 795	27 981	37 776
Clothing and footwear .....	8 837	37 195	46 032
Wood, wood products and furniture	21 555	71 100	92 655
Paper, paper products, printing and publishing .....	43 187	73 938	117 124
Chemical, petroleum and coal products .....	19 821	30 217	50 038
Non-metallic mineral products .....	15 460	38 880	54 340
Basic metal products .....	46 976	108 331	155 307
Fabricated metal products .....	31 998	70 606	102 604
Transport equipment .....	75 385	242 110	317 495
Other machinery and equipment .....	55 101	157 710	212 811
Miscellaneous manufacturing .....	23 093	58 166	81 259
Total manufacturing .....	419 245	1 083 078	1 502 324

## SELECTED FACTORY PRODUCTS

The factory products listed in this section are not necessarily the principal items produced in this State. Where publication of details of an individual product would enable the output of a particular manufacturer to be determined, these figures are treated as confidential and are not separately available for publication. As a considerable number of products are produced in this State by industries containing one or two dominant firms, the list of publishable items is considerably restricted.

**Selected Articles Produced: South Australia <sup>(a)</sup>**

Item	Units of Quantity	1981-82			1982-83		
		Production	Sales and Transfers		Production	Sales and Transfers	
		Quantity	Quantity	Value	Quantity	Quantity	Value
				\$'000			\$'000
Aerated and carbonated water- ers, canned and bottled .....	'000 L	102 932	96 444	47 782	109 463	103 938	57 319
Blinds and awnings:							
Metal venetian .....	..	..	..	1 066	..	..	988
Outdoor, canvas .....	..	..	..	2 104	..	..	2 476



Selected Articles Produced: South Australia <sup>(a)</sup> (continued)

Item	Units of Quantity	1981-82			1982-83		
		Production	Sales and Transfers		Production	Sales and Transfers	
		Quantity	Quantity	Value	Quantity	Quantity	Value
				\$'000			\$'000
Blinds and awnings (continued)							
Outdoor, metal .....	..	..	..	1 533	..	..	1 466
Bread, total value .....	..	..	..	61 313	..	..	68 425
Cakes, pastry, pies and puddings (not canned) .....	..	..	..	48 896	..	..	52 424
Cheese (excluding processed cheese) .....	'000 kg	18 479	18 321	n.a.	21 557	20 984	n.a.
Cheese, total value .....	..	..	..	37 364	..	..	45 227
Commercial and job printing ..	..	..	..	87 655	..	..	91 567
Corrugated fibre paperboard containers .....	..	..	..	46 923	..	..	56 733
Electricity regulating, starting and controlling apparatus ....	..	..	..	13 963	..	..	14 787
Flour, white .....	tonnes	74 208	74 485	20 726	72 839	73 430	22 817
Fresh meat, carcasses, whole or butchered .....	..	..	..	102 058	..	..	111 833
Furniture:							
Sheet metal .....	..	..	..	10 948	..	..	9 922
Wooden .....	..	..	..	75 707	..	..	76 788
Gloves, work .....	doz. pairs	21 288	24 223	1 206	17 779	18 620	995
Ice .....	tonnes	15 909	15 897	737	19 517	19 516	966
Ice cream .....	'000 L	12 684	n.p.	n.p.	15 498	n.p.	n.p.
Machinery:							
Conveyors, appliances and parts .....	..	..	..	9 557	..	..	10 908
Hoists, cranes, lifting machinery .....	..	..	..	8 113	..	..	9 386
Pumping and parts .....	..	..	..	15 519	..	..	17 201
Mattresses, innerspring .....	No.	63 347	63 385	6 362	63 707	61 030	7 143
Milk, liquid whole, packed .....	'000 L	..	..	48 291	..	99 646	45 313
Newspapers and periodicals printed and published .....	..	..	..	28 668	..	..	30 163
Paints:							
Architectural and decorative; Primers and undercoats ...	'000 L	486	529	1 509	263	296	957
Finishing coats .....	'000 L	4 153	4 382	12 994	2 338	2 263	8 044
Prawns and shrimps .....	'000 kg	5 811	5 642	51 422	5 184	5 273	61 930
Ready-mixed concrete .....	m <sup>3</sup>	1 014 189	1 014 189	66 320	987 243	987 243	71 934
Smallgoods .....	..	..	..	28 184	..	..	31 683
Steel, fabricated constructional .....	tonnes	..	..	60 083	..	..	64 140
Tallow, inedible .....	'000 kg	26 414	25 896	9 552	30 939	30 094	10 701
Tarpaulins .....	..	..	..	859	..	..	1 006
Window frames, aluminium ....	..	..	..	21 197	..	..	21 407
Wine:							
Fortified .....	'000 L	33 516	39 109	41 905	20 675	26 481	33 188
Unfortified .....	'000 L	163 814	189 463	156 535	154 083	184 889	182 968

(a) Includes details for Northern Territory.

## INDIVIDUAL INDUSTRIES

In this section details are given of major South Australian secondary industries. However, in order to maintain confidentiality of details for individual businesses, statistics relating to a number of important industries are not published. The classification used is based on the 1978 Edition of ASIC.

## Meat and Abattoir By-products

Most of the abattoirs in South Australia are located in country areas. Details of country butchers who slaughter livestock mainly for sale in their own retail shops are not included in the following table.

**Meat and Abattoir By-products, South Australia**

(Note: Excludes single establishment enterprises with fewer than four persons employed.)

Year	Establishments		Average Employment	Wages and Salaries	Purchases, Etc.	Turnover	Value Added
	Adelaide Statistical Division	Other					
	Number	Number	Number	\$'000	\$'000	\$'000	\$'000
1980-81 .....	12	22	3 197	35 820	138 146	198 618	63 291
1981-82 .....	16	23	3 239	46 077	162 356	239 112	72 805
1982-83 .....	15	21	3 164	51 385	189 177	272 456	81 009

**Wood and Wood Products**

The major activities in this sector of manufacturing are log sawmilling, resawn and dressed timber and joinery and wooden structural fittings industries.

**Wood and Wood Products, South Australia**

(Note: Excludes single establishment enterprises with fewer than four persons employed.)

Year	Establishments		Average Employment	Wages and Salaries	Purchases, Etc.	Turnover	Value Added
	Adelaide Statistical Division	Other					
	Number	Number	Number	\$'000	\$'000	\$'000	\$'000
1980-81 .....	148	41	5 232	62 493	181 083	283 098	104 430
1981-82 .....	143	40	4 963	63 553	184 870	290 396	105 320
1982-83 .....	137	35	4 451	63 290	180 146	282 219	100 663

**Printing and Allied Industries**

There are two large establishments producing daily newspapers in Adelaide. Newspaper printing offices are also located in most large towns, and a number of these produce newspapers for more than one locality. Particulars of general printing establishments, including the activities of the Government Printing Division of the Department of Services and Supply, are also incorporated in the following table.

**Printing and Allied Industries, South Australia**

(Note: Excludes single establishment enterprise with fewer than four persons employed.)

Year	Establishments		Average Employment	Wages and Salaries	Purchases, Etc.	Turnover	Value Added
	Adelaide Statistical Division	Other					
	Number	Number	Number	\$'000	\$'000	\$'000	\$'000
1980-81 .....	144	34	5 958	69 804	97 534	220 919	126 318
1981-82 .....	149	35	5 962	79 377	124 549	263 051	144 996
1982-83 .....	147	34	5 814	85 246	117 351	274 293	150 740

**Cement and Concrete Products**

Only one firm produces cement in South Australia, its two manufacturing plants being at Birkenhead and Angaston. The Angaston plant, based on the limestone deposits, is an example of a manufacturing location being established near the source of the raw material. Half of the forty-nine plants producing ready-mixed concrete in 1982-83 were located in the Adelaide Statistical Division. Concrete pipes are produced at four separate locations including two in the country.

**Cement and Concrete Products, South Australia**

(Note: Excludes single establishment enterprises with fewer than four persons employed.)

Year	Establishments		Average Employment	Wages and Salaries	Purchases, Etc.	Turnover	Value Added
	Adelaide Statistical Division	Other					
	Number	Number	Number	\$'000	\$'000	\$'000	\$'000
1980-81 .....	49	34	1 490	21 828	85 981	141 278	55 239
1981-82 .....	52	34	1 463	23 877	104 158	169 863	67 182
1982-83 .....	51	34	1 594	28 694	116 126	183 152	72 477

**Basic Iron and Steel**

In 1941 a blast furnace was installed at Whyalla to utilise iron ore from the Middleback Ranges. This ore is transported by rail a distance of fifty-five kilometres to Whyalla. Before 1965 Whyalla was the major source of Australia's foundry iron but this changed in 1965 when the Basic Oxygen Steelmaking plant began producing steel. The main items of production are structural steel sections (such as girders and beams) and rails.

There are a small number of pipe and tube making firms located in and near Adelaide.

**Transport Equipment (Motor Vehicles and Parts)**

The largest single industry in South Australia and a major contributor to industrial growth since 1945 is the motor vehicle industry. However, as there are only a few firms engaged in motor vehicle production, confidentiality reasons prevent publication of detailed figures.

Immediately after the 1939-45 War, General Motors-Holdens Pty Ltd prepared for the production of an Australian-built car, and volume production commenced in 1948. A number of major increases in productive capacity have been made by this firm involving not only considerable expansion at the Woodville site but also the establishment of a plant at Elizabeth.

Tonsley Park has become the centre of manufacturing operations for Mitsubishi Motors Australia Limited (formerly Chrysler Australia Ltd) and in July 1967 the company expanded its operations to include a large foundry and engine plant at Lonsdale, near Port Stanvac.

These large motor vehicle plants in turn absorb the products of many establishments producing vehicle components. Other manufacturers produce omnibus and commercial vehicle bodies, garage equipment, trailers, caravans, and a wide range of vehicle accessories.

**Transport Equipment (Motor Vehicles and Parts), South Australia**

(Note: Excludes single establishment enterprises with fewer than four persons employed.)

Year	Establishments		Average Employment	Wages and Salaries	Purchases, Etc.	Turnover	Value Added
	Adelaide Statistical Division	Other					
	Number	Number	Number	\$'000	\$'000	\$'000	\$'000
1980-81 .....	74	5	15 333	207 205	470 198	883 629	387 029
1981-82 .....	76	5	15 514	230 777	634 058	1 025 771	399 240
1979-80 .....	76	5	14 936	278 695	652 214	1 102 694	509 766

In 1982-83 establishments mainly engaged in the manufacture of motor vehicles and parts contributed 15.6 per cent of South Australia's total manufacturing employment. It should be noted that this figure understates the importance of the motor vehicle industry to South Australia as some firms involved in the manufacture of components and

accessories are classified to other industries. (For example, firms making rubber components for the motor industry are considered to be in the rubber industry.)

### Transport Equipment (Other than Motor Vehicles)

In 1982-83 the transport equipment (other than motor vehicles) industries accounted for 2.6 per cent of the manufacturing employment in South Australia.

Motor vehicles and parts and other transport equipment together accounted for 18.1 per cent of total South Australian manufacturing employment.

#### Transport Equipment (Other than Motor Vehicles), South Australia

(Note: Excludes single establishment enterprises with fewer than four persons employed.)

Year	Establishments		Average Employment	Wages and Salaries	Purchases, Etc.	Turnover	Value Added
	Adelaide Statistical Division	Other					
	Number	Number	Number	\$'000	\$'000	\$'000	\$'000
1980-81 .....	24	11	2 752	31 602	38 508	74 464	39 586
1981-82 .....	28	9	2 657	36 851	23 375	69 369	46 377
1982-83 .....	26	7	2 447	38 800	20 120	63 038	41 796

### Appliances and Electrical Equipment

For many years South Australia has been one of the leading States in the production of the larger household appliances, including refrigerators, washing machines, cooking stoves and ranges. These items constitute a significant part of the total activity shown in the next table. Also represented are manufacturers of radio and television components, water-heating systems, batteries and other electrical machinery and equipment.

This group of industries is the second most important in the State and in 1982-83 accounted for 8.0 per cent of total manufacturing employment in South Australia.

#### Appliances and Electrical Equipment, South Australia

(Note: Excludes single establishment enterprises with fewer than four persons employed.)

Year	Establishments		Average Employment	Wages and Salaries	Purchases, Etc.	Turnover	Value Added
	Adelaide Statistical Division	Other					
	Number	Number	Number	\$'000	\$'000	\$'000	\$'000
1980-81 .....	83	3	9 617	109 251	271 505	466 699	192 310
1981-82 .....	94	3	9 416	124 453	339 903	541 081	216 524
1982-83 .....	82	4	7 653	120 452	266 635	466 723	177 863

### Further References

Additional information may be found in the following publications:

- 8202.0 *Manufacturing Establishments: Summary of Operations by Industry Class—Australia*
- 8202.4 *Manufacturing Establishments: Details of Operations by Industry—South Australia*
- 8203.0 *Manufacturing Establishments: Details of Operations by Industry Class—Australia*

### Further References (continued)

- |        |                                                                                                                        |
|--------|------------------------------------------------------------------------------------------------------------------------|
| 8203.4 | <i>Manufacturing Establishments: Small Area Statistics—South Australia</i>                                             |
| 8204.0 | <i>Manufacturing Establishments: Selected Items of Data Classified by Industry and Employment Size—Australia</i>       |
| 8204.4 | <i>Manufacturing Establishments: Selected Items of Data Classified by Industry and Employment Size—South Australia</i> |
| 8303.0 | <i>Manufacturing Commodities: Principal Articles Produced—Australia</i>                                                |

## **PART 10**

# **COMMERCE**

## **10.1 INTERNAL TRADE**

### **RETAIL TRADE**

A Census of Retail Establishments and Selected Service Establishments was conducted for the year ended 30 June 1980 (1979-80 Retail Census). The scope of the 1979-80 Retail Census included all establishments classified to the Australian Standard Industrial Classification 1978 Edition (ASIC) Subdivision 48 (Retail Trade) and the 'selected service' classes from ASIC Division L (Recreation, Personal and Other Services). The ASIC classes from Division L were 9133—Motion picture theatres, 9231—Cafes and restaurants, 9232—Hotels, etc. (mainly drinking places), 9233—Accommodation, 9241-3—Licensed clubs, 9340—Laundries and dry cleaners, 9351—Men's hairdressers and 9352—Women's hairdressing and beauty salons.

Retail trade, as specified in the ASIC generally includes the resale of new or used goods to final consumers for personal or household consumption. To conform with the concepts and definitions used in the Australian National Accounts, sales of certain commodity items were treated as wholesale rather than as retail sales. These commodity items were building materials; builders' hardware and supplies such as tools of trade, paint, etc.; commercial refrigerators; business machines; tractors, farm machinery and implements; earth moving equipment and grain, feed, fertilisers and farm supplies.

Some types of establishments were excluded from the census even though they would have been classified to industries covered by it, because of difficulties in ensuring adequate coverage. These were door-to-door salesmen, independent van salesmen (of all kinds other than independent bread and milk vendors), and occasional stall holders. In

addition, details were not collected from organisations operating vending machines on the premises of other businesses. It is also likely that some types of accommodation establishments which do not hold liquor licences (e.g. guest houses and holiday flats), included in this census for the first time, may not have been fully covered. The aim of the census was to include all retail and selected service establishments which operated at any time during the year ended 30 June 1980. Seasonal businesses, which normally operate during certain periods of the year, were included as far as possible even if they were not operating at 30 June 1980. However, establishments which ceased operations during the year or commenced operations during the last two months of the year were included only if their contribution to statistical aggregates was significant.

**Retail and Selected Service Establishments: Summary of Operations**  
by Industry Class, South Australia, 1979-80 <sup>(a)</sup>

Industry Class	Establishments at 30 June	Persons Employed at 30 June		Wages and Salaries	Retail Sales	Turnover <sup>(b)</sup>
		Males	Females			
		Number			\$'000	
Retail establishments:						
Department and general stores;						
Department stores .....	32	3 200	7 768	76 433	408 965	432 465
General stores .....	67	243	493	5 389	37 133	38 582
Clothing, fabrics and furniture stores;						
Men's and boys' wear stores ..	168	468	322	5 584	39 285	40 239
Women's and girls' wear stores	467	234	1 628	10 524	79 261	79 616
Footwear stores .....	220	291	704	5 907	42 036	42 339
Shoe repairers .....	33	53	5	406	70	1 611
Fabrics and household textile stores .....	174	168	571	4 696	30 076	30 554
Floor coverings stores .....	78	328	152	3 930	33 991	36 163
Furniture stores .....	154	672	380	9 003	69 933	71 009
Household appliance and hardware stores;						
Domestic hardware stores .....	133	210	295	2 486	20 030	22 811
Watchmakers and jewellers .....	172	285	494	4 833	29 774	32 936
Music stores .....	106	198	165	2 088	22 039	22 506
Household appliance stores ....	270	1 321	635	17 141	142 216	173 000
Electric appliance repairers n.e.c. ....	39	208	67	2 638	1 286	10 545
Motor vehicle dealers, petrol and tyre retailers;						
New motor vehicle dealers .....	776	6 157	1 317	61 714	523 134	817 915
Used motor vehicle dealers .....	315	1 040	264	9 993	159 894	166 248
Service stations .....	716	2 651	1 399	18 130	(c)247 389	(c)271 847
Smash repairers .....	265	1 495	253	12 308	602	39 839
Motor cycle dealers .....	60	286	72	2 714	20 363	26 203
Boat and caravan dealers .....	82	288	85	2 729	29 834	32 242
Tyre and battery retailers .....	158	1 005	135	10 077	65 997	77 930
Food stores;						
Grocers, confectioners and tobacconists .....	1 662	5 607	9 987	66 202	788 394	799 732
Butchers .....	716	1 828	491	12 890	112 830	114 042
Fruit and vegetable stores .....	242	394	638	2 742	30 453	30 805
Liquor stores .....	77	171	90	1 712	29 702	29 879
Bread and cake stores .....	161	192	593	3 391	17 497	17 793
Fish shops, take away food and milk bars .....	769	1 585	2 546	12 260	90 382	94 400
Other retailers;						
Pharmacies .....	455	670	1 711	16 156	92 537	95 416
Photographic equipment stores	73	93	113	1 324	8 342	11 258
Sports and toy stores .....	223	475	299	3 673	34 332	35 920
Newsagents, stationers and booksellers .....	418	649	861	6 329	62 370	67 325
Secondhand goods dealers .....	197	307	263	3 277	17 759	18 252
Nurserymen and florists .....	134	239	456	3 407	17 302	17 887
Retailing n.e.c. ....	110	183	179	1 835	10 308	11 724
Total retail establishments ...	9 722	33 194	35 431	403 919	3 315 516	3 811 032

**Retail and Selected Service Establishments: Summary of Operations  
by Industry Class, South Australia, 1979-80 <sup>(a)</sup> (continued)**

Industry Class	Establishments at 30 June	Persons Employed at 30 June		Wages and Salaries	Retail Sales	Turnover (b)
		Males	Females			
		Number			\$'000	
Selected service establishments:						
Motion picture theatres .....	69	399	385	4 786	3 129	16 016
Restaurants, hotels and accommodation;						
Cafes and restaurants .....	372	1 842	3 015	23 116	22 109	76 051
Hotels, etc. (mainly drinking places) .....	595	3 933	4 914	51 487	213 802	260 102
Accommodation .....	411	990	1 945	16 574	4 792	51 870
Licensed clubs;						
Licensed bowling clubs .....	18	44	10	364	1 127	1 559
Licensed golf clubs .....	26	216	100	2 224	2 077	6 188
Licensed clubs n.e.c. ....	174	556	742	6 781	20 946	29 311
Laundries and dry cleaners .....	148	491	901	10 505	339	23 329
Hairdressers, beauty salons;						
Men's hairdressers .....	18	26	39	310	127	844
Women's hairdressing and beauty salons .....	198	238	921	6 960	1 795	14 970
Total selected service establishments .....	2 029	8 735	12 972	123 107	270 244	480 239
Total retail and selected service establishments .....	11 751	41 929	48 403	527 026	3 585 760	4 291 271

(a) Excludes all bread and milk vendors and single establishment enterprises with turnover of less than \$50 000 (except for hotels and accommodation establishments).

(b) Sales of goods (retail and wholesale) and all other operating revenue.

(c) The retail sales and turnover figures for service stations do not reflect sales of petrol on commission.

A comparison of retail trading in South Australia and in Australia during 1979-80 is shown in the following table. In this and in the earlier table showing employment and wages, employment figures include working proprietors but wages exclude the drawings of working proprietors.

**Retail and Selected Service Establishments: South Australia and Australia, 1979-80 <sup>(a)</sup>**

Particulars	South Australia	Australia
	Number	
Establishments at 30 June 1980 .....	11 751	135 652
Persons employed at 30 June 1980 .....	90 332	1 004 150
	\$ million	
Wages and salaries .....	527.0	6 072.7
Retail sales .....	3 585.8	42 301.1
Turnover .....	4 291.3	52 458.4

(a) Excludes all bread and milk vendors and single establishment enterprises with turnover of less than \$50 000 (except for hotels and accommodation establishments).



**Retail and Selected Service Establishments: Number of Establishments  
and Value of Retail Sales by Commodity Item, South Australia, 1979-80 <sup>(a)</sup>**

Commodity Item	Establishments at 30 June	Retail Sales of Goods		
		Value	Value Per Establishment	Value Per Head of Population
		\$'000	\$	\$
Groceries and confectionery .....	3 572	543 066	152 034	418.0
Fresh meat .....	1 102	161 380	146 443	124.2
Fresh fruit and vegetables .....	1 324	69 985	52 859	53.9
Bread, cakes and pastries .....	1 918	55 025	28 689	42.4
Ready to eat take away food, including fresh seafoods .....	1 628	78 972	48 509	60.8
Ice cream, soft drinks, milk drinks, etc. for immediate consumption .....	2 568	35 854	13 962	27.6
Beer, wine and spirits .....	1 276	278 447	218 219	214.3
Cigarettes and other tobacco products .....	3 901	93 579	23 988	72.0
Furniture, mattresses, awnings, blinds, etc.	427	88 785	207 927	68.3
Floor coverings, carpets, lino, floor tiles, etc.	267	46 618	174 599	35.9
Fabrics, piece goods, drapery, manchester, blankets, soft furnishings, etc. ....	548	74 208	135 416	57.1
Clothing and accessories—men's and boys'	691	106 225	153 726	81.8
Clothing—women's, girls' and infants' .....	983	198 087	201 512	152.5
Footwear .....	723	68 861	95 243	53.0
Radios, record players, tape recorders, television sets, etc. ....	440	60 966	138 559	46.9
Musical instruments, records, sheet music, etc. ....	304	30 316	99 724	23.3
Domestic refrigerators, washing machines, stoves, air conditioners, etc. ....	298	49 789	167 077	38.3
Other household appliances .....	468	56 536	120 803	43.5
Kitchenware, china and garden equipment	964	66 223	68 696	51.0
Petrol, oils and motor lubricants, etc. <sup>(b)</sup> ....	1 262	231 282	183 266	178.0
New motor vehicles .....	296	335 767	1 134 348	258.5
New parts and accessories for motor vehicles	1 183	83 863	70 890	64.6
Used motor vehicles .....	552	248 707	450 556	191.4
Used parts and accessories for motor vehicles .....	171	12 846	75 123	9.9
New and used motor cycles, motor scooters, parts and accessories .....	166	24 279	146 259	18.7
New and used tyres, tubes and batteries .....	1 049	73 174	69 756	56.3
Boats, outboard motors and trailers .....	107	18 556	173 421	14.3
New and used caravans .....	53	11 308	213 358	8.7
Cosmetics, perfumes, toiletries .....	1 121	56 731	50 607	43.7
Prescription and patent medicines and therapeutic appliances .....	573	58 245	101 649	44.8
Photographic equipment and supplies .....	516	15 435	29 913	11.9
Watches, clocks, jewellery, silverware .....	558	39 585	70 941	30.5
Sporting and camping goods, bicycles, toys .....	752	57 364	76 282	44.2
Books, newspapers, religious goods .....	1 742	87 921	50 471	67.7
Antiques, disposal goods, unredeemed pledges and other secondhand goods .....	225	18 433	81 924	14.2
Cut flowers, garden seeds, shrubs, trees and other nursery stock .....	239	18 623	77 921	14.3
Goods not included above .....	923	30 722	33 285	23.6
Total retail sales of goods .....	..	3 585 760	..	2 760.2

(a) Excludes all bread and milk vendors and single establishment enterprises with turnover of less than \$50 000 (except for hotels and accommodation establishments).

(b) Excludes sales of petrol, oils etc. on commission.

### Surveys of Retail Establishments

During periods between censuses, estimates of the value of retail sales of goods (excluding motor vehicles and parts, petrol, etc., and of delivered milk and bread) are calculated from monthly and quarterly returns received from a sample of retail and selected services establishments.

The following table shows the value of retail sales of goods in South Australia in broad commodity groups for the 1979-80 Census, and retail survey estimates for the years 1981-82, 1982-83 and 1983-84.

## Value of Retail Sales: Commodity Groups, South Australia

Commodity Group	Value of Retail Sales of Goods			
	1979-80	1981-82	1982-83	1983-84
	\$ million			
Groceries .....	543.1	625.8	804.1	913.3
Fresh meat .....	161.4	202.1	207.8	205.3
Other food .....	239.8	357.2	330.8	368.3
Total food and groceries	944.3	1 185.1	1 342.7	1 486.9
Beer, wine and spirits .....	278.4	344.4	359.6	398.3
Clothing, drapery, etc. ....	378.5	466.6	509.0	545.5
Footwear .....	68.9	83.5	86.0	98.7
Hardware, china, etc. ....	105.8	137.4	152.9	167.7
Electrical goods .....	197.6	254.0	274.0	306.3
Furniture and floor coverings .....	135.4	170.8	198.6	204.8
Chemist goods .....	115.0	142.3	166.4	180.4
Newspapers, books and stationery .....	87.9	104.1	124.4	131.0
Other goods .....	234.2	293.5	299.2	320.5
Total .....	2 546.0	3 181.7	3 512.3	3 840.0

## WHOLESALE TRADE

The first full census of wholesale trade was conducted as part of the integrated Economic Censuses of 1968-69 which were discussed in detail on pages 446-57 of the *South Australian Year Book* 1971. A sample survey of wholesale establishments conducted in respect of the year ended 30 June 1982 produced estimates only for Australia as a whole.

The term wholesale trade was used in the wholesale census and survey in the broad sense to include the resale (by agents or principals) of new or used goods to retailers or other wholesalers or to institutional (including government), professional or other business users (including farmers and builders). The more important types of business engaged in wholesale trade are wholesale merchants, who take title to the goods they sell; manufacturers sales branches; commission agents, including import and export agents and purchasing agents; petroleum products distributors; and co-operative and marketing boards engaged in marketing farm products.

## INTERSTATE TRADE

Although a wide range of statistics of production, domestic sales and overseas trade in goods has been prepared for many years, knowledge of trading patterns in the South Australian economy was deficient because of the absence of statistics of the interstate trade undertaken by businesses in this State.

To overcome this deficiency, surveys of interstate trade in merchandise were undertaken in respect of the years ended 30 June 1979 and 1982 and another survey was undertaken for the year ended 30 June 1985.

Results from the 1981-82 survey are shown in the following three tables.

## Value of Interstate Trade by Commodity, South Australia, 1981-82

Commodity Group	Exports		Imports	
	\$m	SE%	\$m	SE%
Livestock, food, animal and vegetable oils and fats .....	381.6	(7.1)	395.3	(10.3)
Australian wine and brandy .....	194.3	(5.8)	10.9	(3.2)
Other beverages .....	50.4	(1.4)	21.6	(10.2)
Tobacco and tobacco products .....	23.7	(20.6)	100.8	(33.2)
Mineral fuels, lubricants and related materials .....	192.0	(1.2)	363.6	(5.2)
Chemicals and chemical products .....	136.6	(4.8)	444.3	(17.7)
Other crude materials (inedible) .....	125.9	(1.6)	229.4	(1.1)
Leather, rubber, wood and paper products .....	296.4	(1.2)	244.7	(16.5)
Clothing and footwear .....	103.0	(5.0)	293.8	(10.6)
Textile yarn, fabrics and related products n.e.c. ....	81.5	(5.3)	164.2	(21.3)
Metal products .....	613.7	(1.4)	474.7	(7.6)
Road motor vehicles and parts .....	887.7	(0.5)	546.9	(5.8)
Other transport equipment .....	9.5	(12.3)	31.2	(15.8)
Domestic appliances and equipment .....	282.2	(10.9)	142.7	(22.2)
Other machinery and equipment .....	462.3	(23.6)	391.4	(7.6)
Sanitary, plumbing, heating, lighting equipment and furniture .....	51.5	(6.6)	56.2	(18.4)
Non-metallic mineral manufactures .....	51.1	(4.1)	58.4	(14.4)
Other manufactured goods .....	104.3	(5.7)	318.2	(25.2)
Total .....	4 047.7	(2.9)	4 288.4	(3.4)

## Value of Interstate Trade by Industry, South Australia, 1981-82

Industry	Exports		Imports	
	\$m	SE%	\$m	SE%
Manufacturing .....	3 137.3	(0.8)	1 737.9	(3.1)
Mining .....	50.3	(0.3)	39.5	(5.1)
Construction .....	8.9	(13.5)	4.9	(10.8)
Wholesale trade .....	707.3	(16.3)	1 570.0	(6.4)
Retail trade .....	61.0	(7.0)	787.2	(11.4)
Transport .....	15.8	(-)	28.3	(12.3)
Other .....	67.1	(1.3)	120.7	(3.6)
Total .....	4 047.7	(2.9)	4 288.4	(3.4)

## Value of Interstate Trade by Destination/Origin, South Australia, 1981-82

Destination/Origin	Exports		Imports	
	\$m	SE%	\$m	SE%
New South Wales (incl. ACT) .....	1 271.4	(3.0)	1 455.6	(4.3)
Victoria .....	1 352.0	(1.4)	2 416.3	(4.8)
Queensland .....	508.3	(5.5)	115.9	(15.3)
Western Australia .....	420.5	(10.2)	103.8	(21.3)
Tasmania .....	89.7	(2.8)	43.3	(33.7)
Northern Territory .....	169.3	(3.5)	24.6	(1.3)
Overseas via interstate ports .....	236.4	(6.8)	128.8	(13.0)
Total .....	4 047.7	(2.9)	4 288.4	(3.4)

Results have shown that manufacturing industries are significant net interstate exporters, while the service industries, particularly wholesale and retail trade, are net interstate importers. The estimates shown for trade in commodities reflect the importance of wine and brandy production and processed metal products (including machinery and equipment) to the State's economy. Significant net imports have been recorded for tobacco products, mineral fuels, chemicals and clothing.



## TOURIST ACCOMMODATION

The importance of tourism is recognised by a wide cross section of the community and this has caused a demand for comprehensive statistics on the industry. To satisfy requests from various organisations expressing a need for statistics on tourism, the Bureau conducted a Census of Tourist Accommodation Establishments for the year ended 30 June 1974 to identify and measure the amount, type and location of accommodation available. Furthermore, the 1979-80 Retail Census covered establishments classified to the Australian Standard Industrial Classification, 1978 Edition, Classes 9232—Hotels, etc. (mainly drinking places) and 9233—Accommodation.

To support census information, a series of tourist accommodation surveys was introduced in September quarter 1975 to provide an indication of the utilisation of accommodation available by measuring occupancy rates. The surveys include establishments which provide accommodation predominantly to short term visitors and calculates occupancy rates as the proportion of guest rooms or sites occupied to the number of rooms or sites available for accommodating paying guests.

Establishments in the surveys are grouped into three categories—licensed hotels with facilities *i.e.* bath or shower and toilet in most guest rooms; licensed or unlicensed motels, private hotels or guest houses with facilities; and caravan parks with powered sites for caravans, and toilet, shower and laundry facilities available for guests. Caravan parks were included in the surveys from the September quarter 1977. Excluded at that time were licensed hotels, private hotels and guest houses without facilities.

The number of establishments identified in the survey is determined by the nature of the services and facilities provided, and 116 licensed hotels with facilities, 169 motels and 155 caravan parks were included in June 1984. The following tables show numbers of establishments, capacity, occupancy rates and takings from accommodation from June quarter 1983 to June quarter 1984, details of operations by size of establishment for June Quarter 1984 and by Statistical Division and Subdivision for 1983-84.

## Tourist Accommodation Survey, South Australia

Particulars	Unit	Quarter				
		June 1983	Sept. 1983	Dec. 1983	Mar. 1984	June 1984
LICENSED HOTELS WITH FACILITIES						
Establishment at end of quarter .....	Number	118	117	116	116	116
Guest rooms .....	Number	3 298	3 316	3 264	3 261	3 274
Room occupancy rate .....	Per cent	45.5	44.8	46.2	50.8	49.7
Takings .....	\$'000	5 042	5 110	5 409	6 189	5 963
MOTELS ETC. WITH FACILITIES						
Establishments at end of quarter ...	Number	164	164	166	169	169
Guest rooms .....	Number	4 214	4 209	4 263	4 369	4 388
Room occupancy rate .....	Per cent	54.5	52.2	54.8	62.9	55.8
Takings .....	\$'000	7 244	7 068	7 632	9 288	8 269
CARAVAN PARKS						
Establishments at end of quarter ...	Number	154	154	155	155	155
Sites (a) .....	Number	17 751	17 723	18 260	18 145	18 086
Site occupancy rate .....	Per cent	16.8	13.1	17.5	28.0	18.5
Takings .....	\$'000	1 809	1 529	2 095	3 059	2 141

(a) Includes on-site vans, other powered sites, unpowered sites and cabins, flats, etc.

**Tourist Accommodation Survey: Details by Statistical Division and Subdivision**  
**South Australia, 1983-84**

Statistical Division and Subdivision	Licensed Hotels, Motels etc. with Facilities			Caravan Parks		
	Establish- ments at 30 June 1984	Guest Rooms at 30 June 1984	Average Room Occu- pancy Rate for 1983-84	Establish- ments at 30 June 1984	Sites (a) at 30 June 1984	Average Site Occupancy Rate for 1983-84
	Number	Number	Per cent	Number	Number	Per cent
Para .....	10	110	37.6	5	1 034	42.6
North Eastern .....	12	163	54.3			
Western .....	18	283	44.5			
Eastern .....	41	2 482	61.4	4	401	55.2
Southern .....	25	660	51.7	8	773	34.7
Adelaide .....	106	3 698	57.4	17	2 208	42.1
Barossa .....	8	179	49.3	7	1 128	17.1
Kangaroo Island .....	7	154	49.9	5	553	11.7
Onkaparinga .....	14	310	46.3	13	2 060	16.8
Fleurieu .....						
Outer Adelaide .....	29	643	48.0			
Yorke .....	13	177	47.0	21	2 164	20.6
Lower North .....	6	72	54.2	7	359	15.3
Yorke and Lower North ..	19	249	49.1	28	2 523	19.8
Riverland .....	15	528	43.2	13	1 927	20.2
Murray Mallee .....	12	183	41.0	12	993	10.6
Murray Lands .....	27	711	42.6	25	2 920	17.0
Upper South East .....	17	321	51.5	10	1 107	13.4
Lower South East .....	26	608	47.4	11	1 571	13.5
South East .....	43	929	48.8	21	2 678	13.5
Lincoln .....	18	308	46.0	15	1 700	16.0
West Coast .....	8	221	50.1	7	912	13.8
Eyre .....	26	529	47.7	22	2 612	15.2
Whyalla .....	9	245	56.5	8	715	11.0
Flinders Ranges .....	15	380	56.2			
Far North .....	5	178	34.5			
Pirie .....	6	100	62.5	9	679	17.3
Northern .....	35	903	52.9	17	1 394	13.4
South Australia .....	285	7 662	52.7	155	18 086	19.2

(a) Includes on-site vans, other powered sites, unpowered sites and cabins, flats, etc.

**Tourist Accommodation Survey: Details by Size of Establishment, South Australia**  
**June Quarter 1984**

Particulars	Unit	Size of establishment (number of rooms)					Total
		1-9	10-15	16-25	26-50	51 and over	
LICENSED HOTELS WITH FACILITIES							
Establishments .....	Number	35	28	20	20	13	116
Guest rooms .....	Number	236	329	407	658	1 644	3 274
Room occupancy rate .....	Per cent	36.1	37.7	40.9	49.3	56.3	49.7
Takings .....	\$'000	177	250	402	951	4 182	5 963
MOTELS ETC. WITH FACILITIES							
Establishments .....	Number	19	38	48	51	13	169
Guest rooms .....	Number	135	482	972	1 853	946	4 388
Room occupancy rate .....	Per cent	39.7	49.4	49.1	58.2	63.4	55.8
Takings .....	\$'000	123	643	1 449	3 620	2 433	8 269

**Tourist Accommodation Survey: Details by Size of Establishment, South Australia  
June Quarter 1984 (continued)**

Particulars	Unit	Size of establishment (number of sites)					Total
		1-50	51-100	101-200	201-300	301 and over	
CARAVAN PARKS							
Establishments .....	Number	32	51	55	5	12	155
Sites (a) .....	Number	1 048	3 714	7 452	1 207	4 665	18 086
Site occupancy rate .....	Per cent	15.4	20.0	20.1	14.5	16.6	18.5
Takings .....	\$'000	85	526	875	118	536	2 141

(a) Includes on-site vans, other powered sites, unpowered sites and cabins, flats, etc.

### Further References

Additional information may be found in the following publications:

- 8501.0 *Retail Sales of Goods—Australia (Monthly)*
- 8502.4 *Interstate Trade—South Australia*
- 8503.0 *Retail Sales of Goods—Australia (Quarterly)*
- 8602.4 *Census of Wholesale Establishments—South Australia*
- 8622.0 *Census of Retail Establishments and Selected Service Establishments, Details of Operations by Industry Class, Australia, 1979-80*
- 8622.4 *Census of Retail Establishments and Selected Service Establishments, Details of Operations by Industry Class, South Australia, 1979-80*
- 8623.4 *Census of Retail Establishments and Selected Service Establishments, Industry Details by Statistical Retail Area and Local Government Area, 1979-80—South Australia*
- 8624.4 *Census of Retail Establishments and Selected Service Establishments, Hotels and Accommodation, 1979-80—South Australia*
- 8625.4 *Census of Retail Establishments and Selected Service Establishments, Commodity Sales and Service Takings, 1979-80—South Australia*
- 8626.4 *Census of Retail Establishments and Selected Service Establishments, Industry and Commodity Details by Size of Establishment, 1979-80—South Australia*
- 8635.0 *Tourist Accommodation—Australia*
- 8635.4 *Tourist Accommodation—South Australia*
- 8638.0 *Wholesale Establishments, Details of Operations by Industry Class, Australia, 1981-82*

## 10.2 OVERSEAS TRADE

### LEGISLATION AFFECTING OVERSEAS TRADE

The power to make laws with respect to trade and commerce with other countries was conferred on the Commonwealth Parliament by the Commonwealth of Australia Constitution Act, Section 51 (i). Under Section 86 of the Constitution, the collection and control of duties of customs and excise passed to the Commonwealth Government on 1 January 1901. Other references to trade and commerce are contained in Sections 87 to 95 of the Constitution.

The legislation affecting overseas trade includes the Customs Act, the Customs Tariff, and the Customs Tariff (Anti-Dumping) Act. The Customs Act is the administrative Act under which the Australian Customs Service within the Department of Industry and Commerce operates, while the Customs Tariff provides the statutory authority for

imposing the actual rates of duty operative from time to time and the Customs Tariff (Anti-Dumping) Act provides protection for Australian industry against various forms of unfair trading.

### **The Customs Tariff**

The first Australian Customs Tariff was introduced by Resolution on 8 October 1901, from which date uniform duties for each State came into effect throughout Australia. The tariff has since been extensively amended—a major amendment was in 1965 when the tariff was re-issued in Customs Co-operation Council Nomenclature (CCCN) form. A new Simplified Tariff, also based on the CCCN, was introduced on 1 January 1983. This followed detailed inquiry by the Industries Assistance Commission.

The Australian Customs Tariff was developed in a period when Government industry policy was influenced by a desire to protect Australian industries from import competition. More recently however, Governments have held the view that for Australia to maximise its national income, it must encourage industries which are capable of operating under lower levels of protection. While Customs collections are still a major source of revenue, the reliance on tariffs as an industry assistance measure is diminishing, with more emphasis being placed on measures which actively assist industry to improve its efficiency. The tariff provides for preferential and general rates of duty. Preferential rates apply to certain goods being the produce or manufacture of Canada, New Zealand, Papua New Guinea, declared preference countries, developing countries and countries specified in the schedules to the Customs Tariff.

General rates apply to goods from all countries which do not qualify for preferential rates of duty under a particular tariff classification.

### **By-laws**

Under certain Customs by-laws, goods may be admitted free of duty or at rates of duty lower than those normally applicable. A pre-requisite for such admission is that suitably equivalent goods are not reasonably available from Australian production. In November 1982 the Commonwealth Government announced that this system of concessional duties would be replaced from 1 July 1984 by a Commercial Tariff Concession Scheme. Concessions would be granted in respect of imported goods where no goods serving similar functions were produced, or capable of being produced in the normal course of business in Australia. Certain other considerations are also relevant to the granting of a Concession. There are provisions under Customs by-law for remitting duty in certain circumstances on imported goods which are to be incorporated in goods for export.

### **Anti-Dumping Legislation**

The *Customs Tariff (Anti-Dumping) Act 1975* provides protection for Australian industry against various forms of unfair trading. This Act authorises the imposition of a dumping duty when goods are sold to Australia at a price which is less than the normal value of the goods, or a countervailing duty on subsidised goods, where the dumping or subsidy causes or threatens material injury to an Australian industry. Special duties may be collected also if dumped or subsidised goods are imported to the detriment of the trade of a third country in the Australian market.

### **Import Controls**

The effects of the world wide recession in the early 1970s necessitated the imposition of quota controls over particular commodities to protect employment and investment in some important Australian industries. At present the textile, clothing and footwear industries are assisted by tariff quotas while the motor vehicle industry had, until 31 December 1984 been assisted by import licensing. From 1 January 1985 the control of the motor vehicle industry was altered to tariff quotas.



The decision to impose import controls either in the form of import licensing or tariff quotas is made by the Commonwealth Government based on the recommendations of the body inquiring into the industry; usually the Industries Assistance Commission but if the matter is urgent, the Temporary Assistance Authority. A Departmental Standing Committee on Industries Assistance (SCIA) also examines the reports and provides advice to the Government before a decision is made.

Both forms of control are usually applied on a global basis and are intended to provide short-term assistance to an industry but there are significant differences in their application.

Licensing is a non-tariff form of protection that imposes an absolute restriction on the quantity, weight or value (as appropriate) of the goods that may be imported in a certain period. Goods imported without a licence cannot be entered for home consumption and may be subject to seizure as prohibited imports. The legal basis for import licensing is the Customs (Import Licensing) Regulations prescribed under the Customs Act.

In respect of goods subject to tariff quotas, by-laws are made pursuant to Section 271 of the Customs Act and Ministerial Determinations are issued pursuant to Section 273 of the Customs Act. These provide for goods to be imported and cleared for home consumption at normal rates of customs duty up to a ceiling level specified by the Government for a particular period. Additional temporary (or penalty) duties are applied to goods entered for home consumption outside the quota arrangements.

The Customs (Prohibited Imports) Regulations list those commodities the import of which is prohibited absolutely, or restricted, on social grounds. Other items are prohibited, or restricted, on health grounds (human, animal or plant) by the *Quarantine Act 1908*, the *Therapeutic Goods Act 1966*, and the *Wildlife Protection (Regulation of Exports and Imports) Act 1982*.

### Export Controls

Under Section 112 of the Customs Act the export of goods from Australia may be prohibited absolutely, prohibited to a specific place, or prohibited unless prescribed conditions or restrictions are observed. Goods subject to this export control are listed in the Customs (Prohibited Exports) Regulations.

## ADVISORY AUTHORITIES ON ASSISTANCE TO INDUSTRIES

### Industries Assistance Commission

The Industries Assistance Commission is a statutory authority which came into existence on 1 January 1974 as a result of the passing of the *Industries Assistance Commission Act 1973* by the Commonwealth Parliament. The Commission replaced the Tariff Board, which since 1921 had been responsible for advising the Government on assistance for industries mainly in the secondary sector of the economy.

The Commission is an advisory body whose functions are to hold inquiries and make reports to the Government on assistance to industries in the primary, secondary and tertiary sectors of the economy. The Commission also has a responsibility to report annually on the general structure of industry assistance and its effect on the economy.

A reference from the Government is the official document directing the Commission to inquire and report on any matter. The Government is required to seek the Commission's advice before it makes changes in the long term assistance afforded industries. References mainly arise from representations to the Government from organisations, companies or individuals seeking assistance. Some references arise from Government commitments to review assistance. The Commission itself has the power to initiate an inquiry under certain circumstances.

Public hearings are held by the Commission in Canberra and in capital cities and regional centres throughout Australia. Any evidence presented to the Commission must be on oath or affirmation. The inquiry subject and the date and location of public hearings are advertised in the press and advised by Commission circular. The Commission normally releases draft reports to give interested parties an opportunity to examine and comment on these reports within the Commission's public inquiry system before the final report is submitted to Government.

After receiving a final report from the Commission, the Government decides whether or not the Commission's advice should be followed. If it decides that assistance afforded a particular industry should be changed, this usually involves introduction of a proposal to this effect in Parliament. The final responsibility for the assistance given to industries within Australia rests with Parliament.

#### **Temporary Assistance Authority**

The Temporary Assistance Authority, which replaced the Special Advisory Authority set up under the Tariff Board Act, came into operation on 1 January 1974 under the provisions of the *Industries Assistance Commission Act 1973*. The main function of the Authority is to undertake inquiries and submit reports to the Government within forty-five days of receipt of a reference from the Government on the question of whether urgent action is necessary to provide assistance to any industry that is experiencing difficulty because of the importation of specified goods. If urgent action is necessary the Authority recommends the nature and extent of the assistance to be provided.

### **ENCOURAGEMENT OF OVERSEAS TRADE**

The Commonwealth Government through the Department of Trade has primary responsibility for overseas trade promotion and publicity. In addition to the services it provides directly, and through Regional Offices in all States and the Northern Territory, the Department also administers the operations of a number of organisations involved in the encouragement of overseas trade.

#### **Trade Commissioner Service**

The Trade Commissioner Service has its statutory base in the *Trade Commissioners Act 1933*. The function of the Service is the promotion of Australia's commercial interests overseas. In pursuing this objective, one of the more important tasks for a Trade Commissioner is to provide the marketing information for Australian exporters to enable them to exploit commercial opportunities in overseas markets.

The Service comprises 166 Trade Commissioners and Assistant Trade Commissioners who serve at fifty-four posts in forty-four countries.

Australian exporters and export organisations are provided with the following facilities:

- surveys of market prospects;
- advice on selling and advertising methods;
- introduction to buyers and agents;
- reports on the standing of overseas firms;
- advice and assistance to business visitors;
- help in organising and carrying through trade missions, trade displays, newspaper supplements and other promotional and publicity activity; and
- information on import duties, import licensing, economic conditions, quarantine and sanitary requirements, and other factors affecting the entry and sale of goods and services.

Specialised Trade Commissioners are being appointed to stimulate exports of selected advanced technology products and services.

Trade Commissioners are also required to service the market information requirements and other needs of Government departments and agencies including the Departments of Primary Industry, Resources and Energy, Transport, Industry and Commerce, the Export Finance and Insurance Corporation and the Australian Overseas Projects Corporation.

In a number of cities where there is a diplomatic or consular mission but no Trade Commissioner, Marketing Officers are appointed to assist Australian businessmen. They work under the direction of the Trade Commissioner whose territory includes the city in which the Marketing Officer is based.

### **Export Incentives Grants**

The Export Development Grants Board administers the *Export Market Development Grants Act 1974*, which has been extended to operate until 1988.

The Export Market Development Grants Scheme provides for taxable cash grants to a maximum of \$200 000 and aims to encourage Australian exporters to seek out and develop overseas markets for goods, services, industrial property rights and know-how which are substantially of Australian origin. The scheme covers also the promotion of eligible internal services, eligible tourist services and services provided by way of computer maintenance, management consultancy and leasing and hiring.

### **Export Finance and Insurance Corporation**

The Export Finance and Insurance Corporation (EFIC) is a statutory corporation of the Commonwealth Government. It operates on commercial lines and is self-supporting. Its commitments are ultimately backed by the Commonwealth Government.

EFIC functions to encourage Australia's export trade in goods and services by providing a specialised range of insurance, indemnity guarantee and financing facilities not normally available from commercial sources.

Since its inception, the Corporation has progressively expanded the range of facilities it offers exporters, and has assumed an increasingly important role in the development of Australian exports.

### **Australian Overseas Projects Corporation**

The Australian Overseas Projects Corporation was established by the Commonwealth Government with the primary objective of assisting consultancy and construction organisations to compete for contracts for overseas development projects. Its major functions are to act as prime contractor, consortium member or agent on behalf of Australian organisations. It also serves as a central point for dissemination of information on overseas projects opportunities.

### **South Australian Trade and Investment Representatives**

The functions of South Australia's Agent-General in London are to foster Australian trade, investment and tourism from the United Kingdom and Western Europe. There are also agencies with similar responsibilities in Hong Kong, Singapore and Tokyo.

The Government also has an Export Bridging Finance Scheme to assist South Australian exporters.

### Promotion of High Technology Products and Services

The Department of Trade has undertaken the special promotion of exports of high technology products and services. Audio-visual displays and prestige publications as well as a catalogue of Australian technology have been produced for use by Trade Commissioners and in general promotion.

## TRADE AGREEMENTS

### Multilateral Agreements

The General Agreement on Tariffs and Trade (GATT), which came into force on 1 January 1948, is a multilateral trade agreement designed to facilitate trading relations and improve trading opportunities between participating countries by reducing tariff and other barriers to the free exchange of goods, and providing rules for the conduct of international trade. The Agreement includes a framework within which negotiations can be held to further reduce barriers to trade, and a structure for embodying the results of such negotiations in a legal instrument.

Australia is one of the original Contracting Parties to the GATT, of which membership now covers ninety countries with a further thirty countries applying its rules on a *de facto* basis.

There have been seven major rounds of multilateral tariff negotiations under the provisions of the Agreement, and a number of smaller scale negotiations preceding the accession of individual countries. As a result, the tariff rates for a great many items entering into world commerce have been reduced and/or bound against increase.

The Tokyo Round of Multilateral Trade Negotiations (MTN), the seventh under the auspices of the GATT, was inaugurated at a meeting of Ministers in Tokyo in September 1973. Almost one hundred countries (both members and non-members of GATT) participated in the negotiations which were substantively concluded during 1979. Fourteen agreements or understandings which aim at liberalising and stabilising international trade in both industrial and agricultural products were finalised in the Tokyo Round. The subjects covered were subsidies and countervailing duties; government procurement; customs valuation; standards; import licensing; anti-dumping; trade in civil aircraft; reciprocity; more favourable treatment and fuller participation for developing countries; trade measures for balance of payments purposes; safeguard action for development purposes; notification, consultation, dispute settlement and surveillance; export restrictions; arrangements relating to bovine meat and dairy products.

Most of the developed-country participants in the negotiations had indicated, by February 1980, that they would accede to the various arrangements. Australia has acceded to those on customs valuation, anti-dumping, import licensing, subsidies, countervailing duties, the framework texts and the agreement on bovine meat and dairy products.

The developed country contracting parties to the GATT have introduced tariff preferences for developing country products under the Generalised System of Preferences (GSP). The Australian system was first introduced in 1966 and was most recently modified in 1981, to include most textile, clothing and footwear products. The system is designed to assist developing countries to overcome their disadvantages in competing with other countries in the Australian market, providing always that such imports do not cause or threaten injury to Australian industry.

**Bilateral Agreements**

Agreements, most of which provide for the exchange of most-favoured-nation (MFN) treatment in trade matters, are in force between Australia and the following countries:

Japan	(1957)	Romania	(1975)
Malaysia	(1958)	India	(1976)
USSR	(1965)	Brazil	(1978)
Yugoslavia	(1970)	Poland	(1978)
Czechoslovakia	(1972)	Bahrain	(1979)
Indonesia	(1972)	Thailand	(1979)
China	(1973)	Iraq	(1980)
German Democratic Republic	(1974)	Saudi Arabia	(1980)
Bulgaria	(1974)	Pacific Islands	(1980)
Hungary	(1974)	Oman	(1981)
Vietnam	(1974)	Kuwait	(1982)
Philippines	(1975)	Cyprus	(1983)
Republic of Korea	(1975)	Italy	(1984)

In addition, preferential agreements are currently operative with Canada. In general this agreement provides for the exchange of preferential rates of duty on a range of commodities traded between Australia and Canada.

Australia has also concluded non-reciprocal preferential trade agreements with Papua New Guinea (PATCRA) and the Forem Island countries of the South Pacific (SPARTECA).

The Australian New Zealand Closer Economic Relations Trade Agreement which came into force on 1 January 1983 provides for a free trade area across the Tasman by 1995.

A general review of the operation of the Agreement is scheduled for 1988.

**METHOD OF RECORDING IMPORTS AND EXPORTS**

Overseas trade statistics are compiled by the Australian Bureau of Statistics from documentation submitted by exporters and importers, or their agents, to the Australian Customs Service as required by the Customs Act.

**Exports**

In general, 'State' overseas export statistics until 1977-78 were compiled on the basis of the State in which the appropriate export documentation was lodged with the Bureau of Customs. While at one time this was generally synonymous with the State of origin of the goods, the advent of containerisation and centralisation of company accounts had resulted in a drift sufficient to make 'lodgment' a meaningless concept upon which to base State statistics, particularly in the case of South Australia where a considerable volume of goods are transported by road or rail to Melbourne for export shipment.

The ABS has changed the basis of recording State details in Australian export statistics from 'State of Lodgment' (of export documents) to 'State of Origin' (of exported goods). State of origin is defined as the State in which the final stage of production or manufacture occurs. This new recording base became operative from 1 July 1978 so that all statistics in the following export tables are on a 'State of Origin' basis, and caution should be exercised when making comparisons with earlier periods.

A 'State of Loading' recording base has simultaneously been developed by ABS. The table on page 452 shows for comparative purposes, South Australian exports (principal commodity groups) by both 'State of Loading' and by 'State of Origin'.

### **Imports**

Imports continue to be collected and published on a 'State of Lodgment of Import Documents' basis and there is no break in the series. Imports do not provide a record of the overseas goods used or consumed in South Australia, as some of the goods pass subsequently to other Australian States and, more commonly, some goods imported through other States pass into South Australia.

### **Commodity Classification**

From 1 July 1978, exports and imports have been classified according to the new Australian Export Commodity Classification (AECC) and Australian Import Commodity Classification (AICC) which is based on the United Nations' Standard International Trade Classification, Revision 2 (SITC R2). This classification is closely related to the Customs Co-operation Council Nomenclature (CCCN) which is used as the basis for the Australian Customs Tariff.

### **Valuation**

#### *Exports*

Goods actually sold to overseas buyers before shipment are valued at the free-on-board (f.o.b.) (*i.e.* the charges and expenses involved in delivering the goods are excluded) Australian port of shipment equivalent of the actual price at which the goods were sold. Goods shipped on consignment are valued at the f.o.b. Australian port of shipment equivalent of the current price offering for similar goods of Australian origin in the principal markets of the country to which the goods are dispatched for sale. The recorded value of exports includes the value of the outside package, other than international containers used for containerised cargo.

#### *Imports*

The recorded value of imports is the customs value (formerly referred to as the value for duty). On 30 November 1981, Australia changed its system of valuation from the Brussels Definition of Value (BDV) to the GATT Agreement on Customs Valuation. The Agreement reflects one of a number of trade related codes of conduct established during the round of Multilateral Trade Negotiations (MTN) concluded in 1979.

The GATT Agreement differs from the Brussels Definition of Value in that it offers a set of practical rules on the valuation of imports rather than a list of conceptual guidelines. Under the Agreement the primary basis for establishing the customs value is the price actually paid or payable, provided a number of conditions are met. The most important condition is that the buyer and seller must be independent of each other. If the conditions are not met the practical rules are used to determine the customs value.

The recording of the value of imports remains on a f.o.b. basis. The recorded value also continues to include the value of the outside package, other than international containers used for containerised cargo. The change in the basis of valuation is expected to have a negligible effect on value and duty import statistics.

### **Exclusions**

The following are excluded from recorded export and import statistics:

- (a) direct transit trade, *i.e.* goods being trans-shipped or moved through Australia for purposes of transport only;

- (b) bunkers and stores supplied to vessels or aircraft prior to arrival in Australia;
- (c) migrants' and passengers' effects exported or imported and parcels post exports or imports of small value for which Customs entries are not required;
- (d) certain materials under inter-governmental agreements for defence and similar-projects for which Customs entries are not required;
- (e) vessels and aircraft engaged in the transport of passengers or goods between Australia and other countries;
- (f) the sale or purchase of any vessel and/or aircraft intended for use on overseas routes;
- (g) fish and other sea products landed abroad directly from the high seas by Australian vessels (exports) or landed in Australia directly from the high seas by Australian vessels (imports);
- (h) export or import consignments where the value of the goods in each transaction is less than \$250;
- (i) interstate trade; and
- (j) Re-exports—goods originally imported which are exported in the same condition in which they were imported or goods originally imported which are exported after undergoing repair or minor operations which leave them essentially unchanged. From 1981-82 re-exports are excluded from the export tables which follow. In 1981-82 re-exports from South Australian ports were valued at \$1·08 million, in 1982-83, \$10·48 million, and in 1983-84, \$14·12 million.

#### *Ships' and Aircraft Stores*

Before July 1982 bunkers and stores supplied to foreign owned vessels and aircraft prior to departure overseas were excluded from export statistics but were published separately as ships' and aircraft stores statistics. The United Nations Statistical Commission has recommended that such bunkers and stores be included in total export statistics. Accordingly, commencing with 1982-83 statistics, these commodities have been classified according to the appropriate AECC items.

#### **Countries**

'Country of origin' appearing in import tables should be taken to mean the country of production. 'Country of consignment' appearing in export tables means the country to which goods were consigned so far as this can be determined at the time of export.

### **OVERSEAS TRADE OF SOUTH AUSTRALIA**

#### **EXPORTS**

The total value of exports of goods of South Australian origin during 1983-84 was \$1 635·8 million. This value is 33·3 per cent higher than 1982-83 and 2·3 per cent higher than 1979-80, the previous record year. This is largely attributable to a strong rural recovery after a drought year, particularly affecting wheat and barley export levels. Petroleum products increased significantly again and the value of export of metals was about 10 per cent higher than in 1982-83. Of other manufactured goods the level of transport equipment exports (particularly assembled and unassembled passenger motor cars and motor vehicle parts) although small in comparison to other commodity groups recorded a 30 per cent increase over 1982-83 and an 80 per cent increase over 1981-82.

## Overseas Exports from South Australia, Principal Commodities

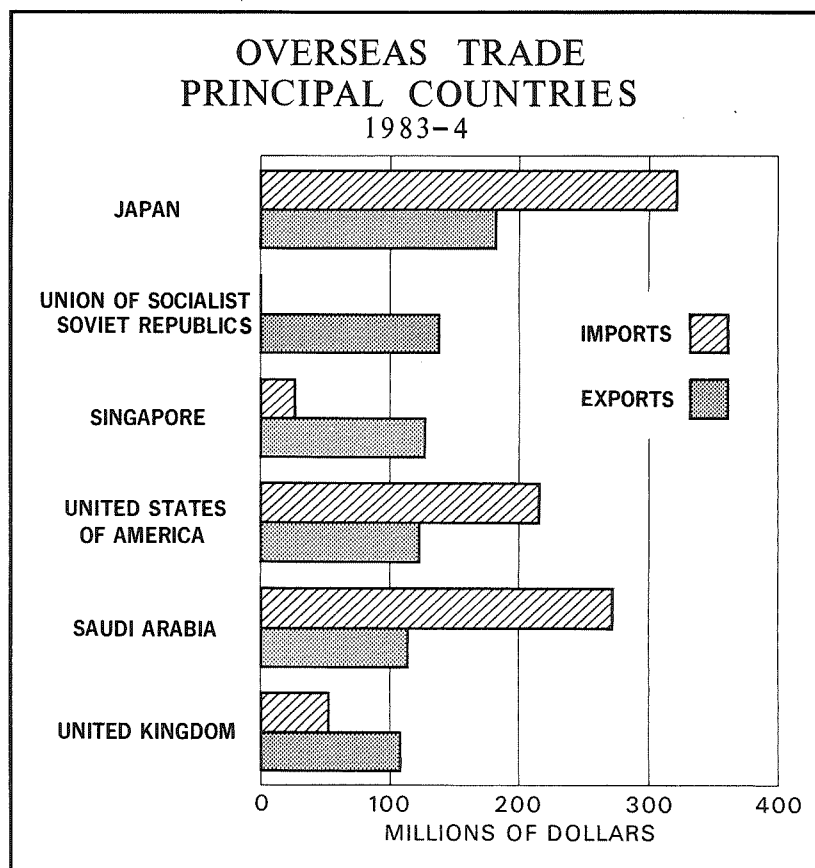
Commodity	1979-80	1980-81	1981-82	1982-83	1983-84
	QUANTITY				
Live sheep and lambs ('000) .....	1 821	1 590	2 158	1 604	1 266
Beef, veal, lamb and mutton (tonnes) .....	60 657	65 070	55 750	73 142	34 772
Wheat (tonnes) .....	2 471 101	1 773 029	1 291 241	543 844	1 590 082
Barley (tonnes) .....	1 590 723	982 740	637 214	371 433	1 397 638
Malt (tonnes) .....	53 473	77 428	88 283	102 291	81 020
Wool:					
Greasy (tonnes) .....	64 582	74 191	63 841	54 572	56 965
Other (tonnes) .....	7 825	7 630	6 949	4 711	6 758
Rock lobster, prawns and shrimps (tonnes) .....	2 395	3 381	4 330	4 593	4 870
Fuel oil ('000 litres) .....	n.a.	n.a.	75 950	119 515	264 012
Lubricating petroleum oils ('000 litres) .....	107 874	59 659	104 502	112 756	152 116
Silver—(refined bullion) ('000 grams) .....	23 567	97	1 760	208 253	169 698
Lead and lead alloys, unworked (tonnes) .....	174 681	141 562	168 448	159 578	175 903
Zinc and zinc alloys, unworked (tonnes) .....	25 990	21 612	22 027	26 874	34 622
Iron and steel; blooms, billets etc. (tonnes) .....	145 433	77 966	206 778	193 332	252 058
	VALUE (\$'000)				
Live sheep and lambs .....	49 370	45 284	58 630	38 347	39 768
Beef, veal, lamb and mutton .....	98 633	99 829	89 710	121 927	67 537
Wheat .....	375 695	304 529	211 144	97 954	271 045
Barley .....	191 806	153 118	105 280	64 486	229 422
Malt .....	10 313	18 819	23 701	27 305	24 279
Wool:					
Greasy .....	156 199	193 014	185 074	161 210	173 615
Other .....	27 546	32 322	28 163	15 620	28 703
Rock lobster, prawns and shrimps .....	25 111	30 120	43 568	60 215	62 907
Fuel oil .....	n.a.	n.a.	16 825	24 482	57 906
Lubricating petroleum oils .....	26 861	16 387	48 934	54 826	71 166
Silver—(refined bullion) .....	11 810	55	456	72 207	65 692
Lead and lead alloys, unworked .....	180 458	95 235	101 669	79 576	77 680
Zinc and zinc alloys, unworked .....	15 660	13 848	17 317	20 676	32 168
Iron and steel; blooms, billets etc. .....	26 899	14 903	33 874	34 426	49 590

## Overseas Exports from South Australia, Principal Commodity Groups

Commodity Group	1980-81	1981-82	1982-83	1983-84
	\$'000			
Food and live animals chiefly for food:				
Live animals chiefly for food .....	48 804	61 638	43 994	43 044
Meat and meat preparations .....	112 070	101 727	136 188	79 035
Dairy products and birds' eggs .....	10 071	5 868	8 134	7 871
Fish and fish preparations .....	37 745	55 421	79 637	79 131
Cereals and cereal preparations .....	482 139	343 648	192 083	532 374
Vegetables and fruit .....	20 687	21 580	26 928	21 267
Sugar, sugar preparations and honey .....	1 228	974	1 106	312
Feeding-stuff for animals .....	3 812	4 653	3 111	6 483
Other .....	266	516	1 041	1 051
Beverages and tobacco .....	6 662	7 808	7 618	11 022
Crude materials, inedible (except fuels):				
Hides, skins and fur skins, raw .....	11 016	12 902	12 413	14 152
Textile fibres and their wastes .....	225 400	213 355	176 908	202 744
Crude fertilisers and crude minerals .....	5 498	5 552	5 456	5 287
Metalliferous ores and metal scrap .....	34 243	26 283	27 707	40 067
Other .....	9 083	7 089	7 022	5 156
Mineral fuels, lubricants and related materials .....	62 467	78 453	96 230	154 726
Animal and vegetable oils, fats and waxes .....	6 726	7 467	7 496	8 208
Chemicals and related products, n.e.c. ....	9 909	6 317	8 212	10 575
Manufactured goods classified chiefly by material:				
Non-metallic mineral manufactures, n.e.c. ....	13 322	12 015	11 961	8 170
Iron and steel .....	33 066	44 204	52 198	62 239
Non-ferrous metals .....	136 358	124 983	175 003	185 293
Manufactures of metals, n.e.c. ....	6 738	9 514	8 026	10 733
Other .....	6 842	6 208	6 817	8 360
Machinery and transport equipment:				
Machinery .....	32 570	34 177	26 676	31 253
Transport equipment .....	22 853	23 095	31 693	41 230
Miscellaneous manufactured articles .....	17 877	20 964	18 396	19 237
Commodities and transactions, n.e.c. ....	42 576	39 527	55 070	46 805
Total exports .....	1 400 028	1 275 938	1 227 125	1 635 825



Although exports of manufactured goods have generally been increasing, the bulk of exports is still of goods usually classified as primary products. In 1983-84 the 'Crude materials, inedible' group accounted for \$267.4 million, or 16.3 per cent of exports (including wool \$202.3 million, 12.4 per cent), and the 'Food and live animals' group accounted for \$770.6 million or 47.1 per cent.



The following table shows the value of exports to principal countries for the year 1983-84.

## Overseas Exports from South Australia to Principal Countries

## Commodity Groups, 1983-84

Commodity Group	Japan	Saudi Arabia	Singapore	USA	USSR	Total (a)
			\$'000			
Food and live animals chiefly for food:						
Live animals chiefly for food .....	—	26 058	335	150	—	43 044
Meat and meat preparations .....	14 727	2 078	1 870	34 667	—	79 035
Dairy products and birds' eggs .....	1 635	—	—	326	—	7 871
Fish and fish preparations .....	34 859	279	199	25 372	—	79 131
Cereals and cereal preparations .....	50 593	79 179	52 635	—	61 700	532 374
Vegetables and fruit .....	1 744	33	3 908	1 314	—	21 267
Sugar, sugar preparations and honey .....	—	107	48	—	—	312
Feeding-stuff for animals .....	146	762	104	—	—	6 483
Other .....	—	136	143	4	—	1 051
Beverages and tobacco .....	638	64	387	1 111	—	11 022
Crude materials, inedible (except fuels):						
Hides, skins and fur skins, raw .....	859	—	—	92	—	14 152
Textile fibres and their wastes .....	24 092	—	—	5 257	75 967	202 744
Crude fertilisers and crude minerals .....	260	—	3	187	—	5 287
Metalliferous ores and metal scrap .....	22 675	1 227	—	2 868	—	40 067
Other .....	786	12	220	401	—	5 156
Mineral fuels, lubricants and related materials .....	—	—	54 634	21 991	—	154 726
Animal and vegetable oils, fats and waxes .....	71	—	—	18	—	8 208
Chemicals and related products, n.e.c. ....	46	45	527	6 696	—	10 575
Manufactured goods classified by material:						
Non-metallic mineral manufactures, n.e.c. ....	519	1	1 909	1 299	—	8 170
Iron and steel .....	5 434	—	56	23	—	62 239
Non-ferrous metals .....	14 114	—	1 626	7 817	—	185 293
Manufactures of metal, n.e.c. ....	20	9	785	1 487	—	10 733
Other .....	157	12	429	34	—	8 360
Machinery and transport equipment:						
Machinery .....	707	3 371	2 897	1 543	7	31 253
Transport equipment .....	673	192	1 394	2 036	—	41 230
Miscellaneous manufactured articles .....	1 420	127	2 531	4 857	—	19 237
Commodities and transactions, n.e.c. ....	4 934	4	260	3 430	—	46 805
Total exports .....	181 108	113 696	126 902	122 980	137 676	1 635 825

(a) To all countries.

## Overseas Exports from South Australia, Principal Countries

Country of Consignment	1979-80	1980-81	1981-82	1982-83	1983-84
			\$'000		
China:					
Excluding Taiwan Province .....	104 304	77 119	44 841	45 027	87 989
Taiwan Province only .....	37 373	28 207	19 389	15 140	29 278
Egypt, Arab Republic of .....	33 659	37 675	4 425	12 831	23 751
France .....	18 278	13 578	28 367	17 916	18 957
Germany, Federal Republic of .....	24 055	16 610	14 660	15 634	21 785
Hong Kong .....	39 658	25 127	41 268	30 245	32 507
India .....	45 575	35 185	38 882	36 770	28 619
Indonesia .....	31 009	22 028	32 831	21 890	26 836
Iran .....	52 097	25 084	21 425	34 441	51 895
Iraq .....	72 098	16 876	63 585	12 666	37 091
Italy .....	55 550	37 466	29 020	24 290	18 112
Japan .....	175 944	171 570	140 415	146 276	181 108
Korea, Republic of .....	21 521	20 720	36 746	48 703	38 799
Kuwait .....	16 151	58 649	32 377	21 584	26 556
Malaysia .....	40 724	12 357	17 218	13 642	21 263
New Zealand .....	70 637	77 410	74 844	75 464	97 131
Saudi Arabia .....	58 915	68 089	101 933	83 730	113 696
Singapore, Republic of .....	43 409	51 778	49 160	49 755	126 902
United Arab Emirates .....	3 421	4 109	9 464	21 445	25 169
United Kingdom .....	32 185	31 805	26 919	93 453	108 129
United States of America .....	103 120	75 567	92 661	97 034	122 980
USSR .....	233 095	244 215	152 021	95 114	137 676
Yemen, People's Democratic Rep. of .....	15 817	22 708	21 639	18 517	24 203
Other .....	270 604	226 096	181 848	195 558	235 393
Total .....	1 599 199	1 400 028	1 275 938	1 227 125	1 635 825

The tables above show the value of exports to principal countries. Japan replaced United Kingdom as South Australia's principal export market in 1966-67 and retained that position until 1978-79. For the next three years USSR was the principal export market, but in 1982-83 and 1983-84 Japan was once again the country of consignment with the highest value of exports (respectively 11.9 and 11.1 per cent of total).

### Exports of Wheat

A record wheat crop was harvested in South Australia in 1983-84 but the full effect of this on export statistics will not appear until 1984-85. For the first six months of 1983-84 wheat exports were small due to the poor drought-affected harvest of 1982-83. The principal wheat markets for 1983-84 were USSR, China and Iraq.

#### Overseas Exports of Wheat from South Australia

Country of Consignment	1979-80	1980-81	1981-82	1982-83	1983-84
			\$'000		
Bangladesh .....	18 728	8 163	—	—	—
China:					
Excl. Taiwan Province ...	70 046	47 174	16 347	—	41 209
Taiwan Province only .....	—	—	—	—	—
Egypt, Arab Republic of .....	17 720	26 454	—	—	18 786
Iraq .....	63 890	—	53 748	3 142	34 520
Korea, Democratic People's Republic of .....	15 789	—	—	—	—
Kuwait .....	—	31 255	—	—	3 821
New Zealand .....	8 172	9 428	7 420	14 694	18 932
Saudi Arabia .....	12 238	9 440	10 293	10 285	12 131
Sri Lanka .....	7 954	5 316	—	—	—
United Arab Emirates .....	—	—	4 993	15 321	15 197
USSR .....	91 344	121 703	75 258	19 352	61 700
Vietnam, Socialist Republic of .....	13 537	1 672	—	—	—
Yemen, Arab Republic of ..	13 288	12 659	11 268	3 023	15 793
Yemen, People's Democratic Republic of .....	7 831	21 560	21 186	15 856	24 001
Other .....	35 158	9 705	10 631	16 281	24 955
Total .....	375 695	304 529	211 144	97 954	271 045

### Exports of Wool

In 1983-84 the major export markets for South Australian wool were USSR (\$76.0 million, 37.5 per cent) and Japan (\$24.1 million, 11.9 per cent).

#### Overseas Exports of Wool from South Australia

Country of Consignment	1979-80	1980-81	1981-82	1982-83	1983-84
			\$'000		
China:					
Excl. Taiwan Province ...	2 563	2 814	8 981	13 851	8 122
Taiwan Province only .....	3 172	6 605	6 309	2 535	6 327
Czechoslovakia .....	5 302	9 065	8 581	2 892	8 901
France .....	5 417	6 154	6 522	5 593	8 903
Germany, Federal Republic of .....	9 359	9 000	7 828	6 105	8 595
India .....	3 333	7 210	5 377	4 029	4 622

## Overseas Exports of Wool from South Australia (continued)

Country of Consignment	1979-80	1980-81	1981-82	1982-83	1983-84
			\$'000		
Italy .....	12 561	16 213	12 543	6 294	10 805
Japan .....	27 242	29 052	27 348	18 522	24 092
Korea, Republic of .....	6 357	8 414	9 850	6 355	3 495
Poland .....	4 978	6 775	6 243	5 552	5 885
USSR .....	64 890	85 529	75 127	73 992	75 967
Yugoslavia .....	8 660	7 559	11 025	9 233	2 924
Other .....	29 911	30 946	27 502	21 877	33 680
Total .....	183 745	225 336	213 236	176 830	202 318

## Value of Exports by 'State of Loading' and by 'State of Origin'

The following table shows a comparison between the two methods of compiling State export statistics (refer to explanatory notes on page 446). The net increases, within certain limitations, represent the excess of the value of South Australian produced commodities which are shipped for overseas export through ports in other States (principally the Port of Melbourne), over commodities produced in other States which are shipped through South Australian ports.

## Overseas Exports from South Australia, Principal Commodity Groups, 1983-84

Commodity Group	State of Loading—SA	State of Origin—SA	Net Difference
		\$'000	
Food and live animals chiefly for food:			
Live animals chiefly for food .....	50 454	43 044	-7 410
Meat and meat preparations .....	20 458	79 035	58 577
Dairy products and birds' eggs .....	932	7 871	6 939
Fish and fish preparations .....	13 141	79 131	65 990
Cereals and cereal preparations .....	513 029	532 374	19 345
Vegetables and fruit .....	10 380	21 267	10 887
Sugar, sugar preparations and honey .....	90	312	222
Feeding-stuff for animals .....	5 938	6 483	545
Other .....	222	1 051	829
Beverages and tobacco .....	2 582	11 022	8 440
Crude materials, inedible (except fuels):			
Hides, skins and fur skins, raw .....	5 047	14 152	9 105
Textile fibres and their wastes .....	91 453	202 744	111 291
Crude fertilisers and crude minerals .....	4 361	5 287	926
Metalliferous ores and metal scrap .....	110 622	40 067	-70 555
Other .....	1 863	5 156	3 293
Mineral fuels, lubricants and related materials .....	154 680	154 726	46
Animal and vegetable oils, fats and waxes .....	7 723	8 208	485
Chemicals and related products, n.e.c. ....	1 585	10 575	8 990
Manufactured goods classified chiefly by material:			
Non-metallic mineral manufactures, n.e.c. ....	5 246	8 170	2 424
Iron and steel .....	57 098	62 239	5 141
Non-ferrous metals .....	89 846	185 293	95 447
Manufactures of metal, n.e.c. ....	6 396	10 733	4 337
Other .....	3 235	8 360	5 125
Machinery and transport equipment:			
Machinery .....	12 418	31 253	18 835
Transport equipment .....	17 009	41 230	24 221
Miscellaneous manufactured articles .....	4 207	19 237	15 030
Commodities and transactions, n.e.c. ....	16 260	46 805	30 545
Re-exports .....	14 122	..	-14 122
Total exports .....	1 220 396	1 635 825	415 429

The value of commodities of South Australian origin loaded for export in ports in other States is as follows—New South Wales \$85.0 million, Victoria \$439.2 million, Western Australia \$3.8 million, other States and Territories \$6.0 million, total \$534.0 million.

The value of commodities of interstate origin loaded for export in South Australian ports is New South Wales \$87.2 million, Victoria \$7.2 million, Western Australia \$8.8 million, Northern Territory \$0.7 million, other States and Territories \$0.6 million, total \$104.4 million.

### IMPORTS

The total value of overseas imports passing through Customs recording points in South Australia during 1983-84 was \$1 318.7 million, \$74.5 million more than in 1982-83.

The proportions of imports obtained from the major sources have changed considerably in the years since the 1939-45 War *e.g.* in 1953-54 Japan supplied only 0.46 per cent of the total value of imports into South Australia but in 1983-84 accounted for 24.3 per cent; United Kingdom which supplied over half the imports in 1953-54 accounted for only 3.9 per cent in 1983-84. Japan was the major source of imports into South Australia in 1983-84 with \$320.6 million, Saudi Arabia (\$271.7 million) and USA (\$215.3 million) were the second and third largest sources of imports.

#### Overseas Imports to South Australia, Principal Commodity Groups

Commodity Group	1980-81	1981-82	1982-83	1983-84
		\$'000		
Food and live animals chiefly for food .....	15 645	18 743	22 149	31 056
Beverages and tobacco .....	4 062	4 268	4 677	6 875
Crude materials, inedible (except fuels):				
Cork and wood .....	16 160	18 294	14 112	20 474
Crude fertilisers and crude minerals .....	23 653	24 462	23 706	18 771
Other .....	23 578	21 133	11 092	11 309
Mineral fuels, lubricants and related materials .....	401 382	438 231	405 218	392 611
Animal and vegetable oils, fats and waxes .....	783	761	863	804
Chemicals and related products, <i>n.e.c.</i> :				
Organic chemicals .....	7 638	8 272	9 869	9 187
Inorganic chemicals .....	5 169	5 628	5 624	5 335
Artificial resins and plastic materials, and cellulose esters and ethers .....	10 016	15 983	12 962	14 280
Other .....	14 605	18 461	26 189	34 283
Manufactured goods classified chiefly by material:				
Rubber manufactures .....	14 322	17 118	15 580	20 690
Paper, paperboard and manufactures thereof .....	23 304	31 586	17 760	29 220
Textile yarn, fabrics and made-up articles .....	36 166	34 752	35 480	42 790
Non-metallic mineral manufactures, <i>n.e.c.</i> .....	18 035	16 058	16 537	17 894
Iron and steel .....	33 418	69 839	59 870	40 127
Non-ferrous metals .....	3 293	3 879	2 952	2 801
Manufactures of metal, <i>n.e.c.</i> .....	18 826	24 510	20 802	23 982
Other .....	9 442	10 904	11 421	14 845
Machinery and transport equipment:				
Power generating machinery and equipment .....	27 802	43 905	73 661	43 818
Machinery specialised for particular industries .....	54 065	100 765	51 486	59 855
Metalworking machinery .....	10 694	23 842	7 877	5 136
General industrial machinery and equipment, <i>n.e.c.</i> .....	40 859	51 267	84 013	58 312
Office machines and ADP equipment .....	2 840	2 832	8 189	12 802
Telecommunications and sound recording and reproducing apparatus and equipment .....	13 726	19 218	24 902	30 718
Electrical machinery, apparatus and appliances, <i>n.e.c.</i> .....	27 910	32 956	36 877	47 681
Road vehicles .....	125 727	131 959	139 203	174 446
Other transport equipment .....	4 575	58 778	5 311	4 331
Miscellaneous manufactured articles:				
Footwear, articles of apparel and clothing accessories .....	7 199	7 907	7 425	6 802
Professional, scientific and controlling instruments; photographic and optical goods; clocks and watches .....	14 874	21 449	19 072	22 279
Other .....	37 966	44 238	46 067	52 418
Commodities and transactions, <i>n.e.c.</i> .....	24 693	15 302	23 298	62 760
Total .....	1 072 426	1 337 301	1 244 243	1 318 693

## Overseas Imports to South Australia, Principal Countries

Country of Origin	1979-80	1980-81	1981-82	1982-83	1983-84
Canada .....	23 180	26 089	\$'000 42 773	21 456	19 134
China:					
Excluding Taiwan Province .....	4 507	4 909	5 272	5 050	6 557
Taiwan Province only .....	15 011	16 575	20 266	18 614	30 440
Christmas Island .....	1 935	2 637	5 073	5 184	2 963
Finland .....	6 064	5 829	6 475	2 777	5 049
France .....	8 904	10 411	12 614	16 536	16 418
Germany, Federal Republic of .....	38 775	38 257	95 459	60 440	52 947
Hong Kong .....	12 756	13 259	17 324	14 614	14 753
India .....	4 793	4 006	4 781	5 521	5 167
Italy .....	19 531	18 830	22 866	24 800	29 003
Japan .....	152 196	214 527	284 060	290 662	320 641
Korea, Republic of .....	3 802	5 922	8 734	7 685	10 076
Kuwait .....			16	6 133	85 649
Malaysia .....	19 791	10 424	10 523	9 787	14 468
Nauru, Republic of .....	4 469	8 241	12 088	6 967	9 100
Netherlands .....	7 029	5 352	11 140	16 082	16 045
New Zealand .....	15 316	14 638	17 739	12 328	21 033
Norway .....	2 222	1 829	15 862	1 883	2 096
Philippines .....	8 369	10 040	5 816	7 330	7 846
Saudi Arabia .....	293 045	394 317	388 601	347 661	271 697
Singapore, Republic of .....	5 444	8 305	59 233	51 659	26 096
South Africa, Republic of .....	2 796	6 769	7 040	3 729	7 674
Sweden .....	8 993	5 210	6 094	6 092	8 200
Thailand .....	2 914	3 361	4 494	4 943	6 907
United Kingdom .....	63 317	54 409	49 362	53 066	51 831
United States of America .....	115 482	134 555	178 911	198 117	215 304
Other .....	64 996	79 814	44 685	45 127	61 599
Total .....	905 637	1 151 515	1 337 301	1 244 243	1 318 693

The following table shows, by commodity groups, the imports from principal countries during the year 1983-84.

## Overseas Imports to South Australia from Principal Countries

## Commodity Groups, 1983-84

Commodity Group	Germany, Federal Republic of	Japan	Kuwait	Saudi Arabia	USA	Total (a)
			\$'000			
Food and live animals chiefly for food .....	1 739	1 546	—	—	4 419	31 056
Beverages and tobacco .....	134	1	—	—	108	6 875
Crude materials, inedible (except fuels):						
Cork and wood .....	40	—	—	—	5 827	20 474
Crude fertilisers and crude minerals .....	—	1 093	—	—	1 681	18 771
Other .....	190	70	—	—	2 520	11 309
Mineral fuels, lubricants and related materials .....	155	83	85 649	271 696	418	392 611
Animal and vegetable oils, fats and waxes .....	—	—	—	—	64	804
Chemicals and related products, n.e.c.:						
Organic chemicals .....	329	1 648	—	—	1 758	9 187
Inorganic chemicals .....	1 096	387	—	—	1 184	5 335
Artificial resins and plastic materials, and cellulose esters and ethers .....	1 532	2 388	—	—	4 162	14 280
Other .....	1 449	810	—	—	21 431	34 283
Manufactured goods classified chiefly by material:						
Rubber manufactures .....	748	7 168	—	—	3 619	20 690
Paper, paperboard and manufactures thereof .....	955	4 126	—	—	2 380	29 220
Textile yarn, fabrics and made-up articles .....	748	10 898	—	—	3 843	42 790
Non-metallic mineral manufactures, n.e.c. ....	676	4 715	—	—	1 477	17 894
Iron and steel .....	913	28 800	—	—	1 463	40 127
Non-ferrous metals .....	554	120	—	—	411	2 801
Manufactures of metal, n.e.c. ....	3 399	4 981	—	—	5 080	23 982
Other .....	1 120	94	—	—	387	14 845
Machinery and transport equipment:						
Power generating machinery and equipment .....	1 669	16 180	—	—	20 311	43 818
Machinery specialised for particular industries .....	6 675	7 937	—	—	33 381	59 855
Metalworking machinery .....	336	2 028	—	—	704	5 136

**Overseas Imports to South Australia from Principal Countries  
Commodity Groups, 1983-84 (continued)**

Commodity Group	Germany, Federal Republic of	Japan	Kuwait	Saudi Arabia	USA	Total (a)
					\$'000	
Machinery and transport equipment (continued):						
General industrial machinery and equipment, n.e.c. ....	10 266	9 514	—	—	20 403	58 312
Office machines and ADP equipment .....	185	395	—	—	11 513	12 802
Telecommunications and sound recording/reproducing apparatus and equipment .....	2 540	24 574	—	—	764	30 718
Electrical machinery, apparatus and appliances, n.e.c. ....	2 750	20 883	—	—	9 411	47 681
Road vehicles .....	6 970	154 324	—	—	5 648	174 446
Other transport equipment .....	56	18	—	—	3 706	4 331
Miscellaneous manufactured articles:						
Footwear, articles of apparel .....	146	133	—	—	214	6 802
Professional, scientific and controlling instruments;						
photographic and optical goods; clocks and watches .....	1 299	4 077	—	—	9 797	22 279
Other .....	2 950	5 410	—	—	9 871	32 418
Commodities and transactions, n.e.c. ....	1 327	6 241	—	1	27 350	62 760
Total .....	52 947	320 641	85 649	271 697	215 304	1 318 693

(a) From all sources.

**CUSTOMS AND EXCISE DUTY**

Excise duty is levied on specific goods of Australian manufacture, principally for the purpose of raising revenue. Although these excise goods do not form a part of overseas trade, the rate of excise duty is in some cases related to the import duty on similar goods. The following table gives details of the value of customs duty and excise duty collected in South Australia during the years 1981-82 to 1983-84.

**Customs and Excise: Gross Revenue, South Australia**

Customs Tariff and Excise Tariff Item	1981-82	1982-83	1983-84
CUSTOMS		\$'000	
Live animals; animal products .....	72	83	137
Vegetable products .....	84	93	247
Animal and vegetable oils and fats .....	37	14	4
Prepared foodstuffs; beverages; spirits; tobacco;			
Spiritous beverages and alcoholic preparations .....	13 016	15 723	18 915
Tobacco, cigarettes, etc. ....	1 471	2 048	1 683
Other .....	645	739	1 339
Automotive spirit and other mineral products .....	204	195	123
Chemicals and products thereof .....	1 205	1 150	2 038
Plastics, resins, rubber and manufactures thereof .....	6 284	5 803	7 291
Hides, skins, leather and articles thereof .....	519	466	549
Wood and articles thereof .....	2 463	2 095	2 364
Paper-making material; paper, paperboard			
and articles thereof .....	1 789	1 775	2 289
Textiles and textile articles .....	8 328	7 492	8 385
Footwear, headgear, umbrellas, etc. ....	570	507	570
Articles of stone, cement, ceramics, glass, etc. ....	2 107	2 170	2 228
Pearls, precious stones and metals, imitation			
jewellery, coin, etc. ....	457	550	425
Base metals and articles thereof .....	8 063	7 309	6 219
Machinery and mechanical appliances, electrical			
equipment .....	21 454	23 367	23 712

## Customs and Excise: Gross Revenue, South Australia (continued)

Customs Tariff and Excise Tariff Item	1981-82	1982-83	1983-84
<b>CUSTOMS (continued)</b>			
		\$'000	
Transport equipment and parts thereof .....	26 882	28 405	35 592
Optical, photographic, precision, medical, musical instruments/apparatus, clocks, watches, sound, TV equipment .....	1 531	1 640	1 867
Arms and ammunition and parts thereof .....	40	30	73
Miscellaneous manufactured articles .....	2 728	2 367	2 964
Works of art, antiques, etc. ....	5	1	1
Other customs revenue .....	38	22	94
Primage .....	33	5	—
Total gross customs and primage duties .....	100 025	104 051	119 108
<b>EXCISE</b>			
Petroleum products .....	73 430	112 297	176 438
Spirits .....	16 534	18 575	20 221
Tobacco, cigars and cigarettes .....	66 886	79 894	80 649
Other (a) .....	n.a.	n.a.	n.a.
Total gross excise duties .....	n.a.	n.a.	n.a.
<b>Total gross customs, primage and excise revenue</b>	<b>n.a.</b>	<b>n.a.</b>	<b>n.a.</b>

(a) Details of excise duty on beer are confidential.

## Further References

Additional information may be found in the following publications:

5409·0 *Overseas Trade, Part 1: Exports and Imports—Australia*5410·0 *Overseas Trade, Part 2: Comparative and Summary Tables—Australia*5411·0 *Australian Exports, Country by Commodity*5414·0 *Australian Imports, Country by Commodity*

## 10.3 PRICES

## MEASUREMENTS OF PRICE MOVEMENTS

The prices of a wide range of commodities and services are recorded at regular intervals by the Australian Statistician for the purpose of compiling various price indexes and for publication of series showing actual price levels.

Price indexes aim to measure the degree of change in price levels, or more specifically the proportionate change in the aggregate price, of specified quantities and qualities of a list of selected items. These indexes measure changes through time and it is traditional for presentation purposes to select a certain year, known as the base year, to equate the average aggregate price (of the list of items) in that year to 100 or some other suitable number, and to adjust other years on a proportionate basis.

When index numbers for different places are compared (*e.g.* Consumer Price Index, Capital Cities) the only legitimate comparison is the relative change *i.e.* that prices increased or decreased more in one place than another. Even when a common base year



is used the actual levels of prices, equated to 100 in each case, may differ substantially from place to place; in addition, selected items, qualities or weights may differ from place to place.

In constructing a price index it is necessary to limit attention to a selected list of items because it would clearly be impossible to determine at regular intervals the price of all items entering into a given field of expenditure (e.g. household expenditure in the case of the Consumer Price Index). The list of items selected must be as representative as possible of the field to be covered and consist of items for which price variations can be ascertained accurately at regular intervals. Each item must be assigned a relative importance (weight) in approximate proportion to actual expenditures on that item within the total field of expenditure being considered. Particular care must be taken to detect, assess, and make allowance for changes in quality of selected items.

Over time it becomes necessary to substitute new grades, qualities or types of articles for those formerly used as indicators of price movements in an effort to keep an index representative of current patterns of expenditure. These substitutions can normally be achieved without invalidating the index. From time to time major changes in the overall pattern of expenditure are noted, and in the past these have prompted the abandonment of an existing index in favour of a different index, the composition and weighting of which were more representative of expenditure at that time.

## RETAIL PRICE INDEXES

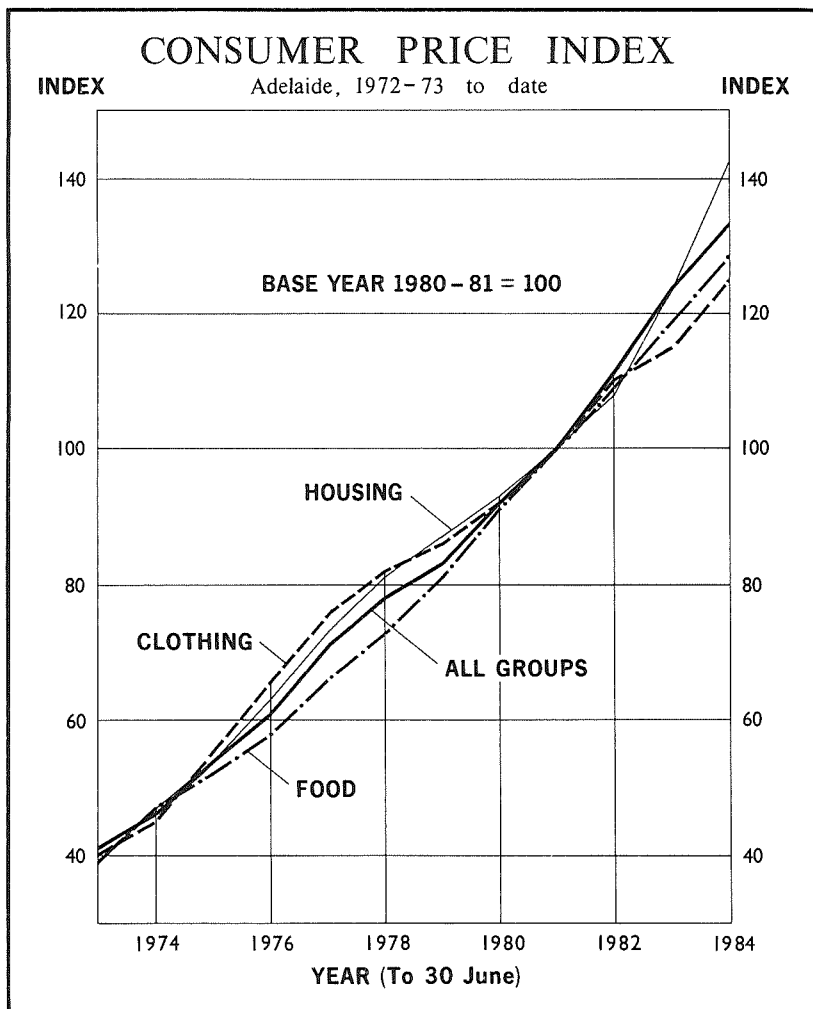
A brief historical review of early price indexes was included on page 494 of the *South Australian Year Book* 1970. Details of movements in the 'C' Series Index from 1901 to 1959 are shown in the Statistical Summary, Appendix A.

### Consumer Price Index

The Consumer Price Index (CPI) is a chain of 'fixed weight aggregative' linked indexes with significant changes in composition and weighting effected at regular short intervals. Links have been effected at June quarter 1952, June quarter 1956, March quarter 1960, December quarter 1963, December quarter 1968, December quarter 1973 (a minor link at September quarter 1974), September quarter 1976 and June quarter 1982.

During each period between links the weighting pattern remains unchanged. At times of linking the weighting pattern is brought up-to-date and the content of the index is reviewed. Under this method, in effect, average percentage price movements are assessed on one pattern up to the time of the link and on another pattern thereafter. The process of linking ensures that the series reflects only price variations and not differences in cost of the old and new combinations and lists of items. The introduction of new items and weights by linking does not, of itself, raise or lower the level of the index.

The weighting pattern of the ninth series introduced in 1976 was derived from the Household Expenditure Survey 1974-75 and represented more than 90 per cent of defined household expenditure by a target group of the population. This target group comprised metropolitan wage and salary earner households with total income of more than the minimum adult wage, but excluding the top 10 per cent of such households, and deriving at least 75 per cent of that income from wages and salaries. This target group was in keeping with the previous general description of the Consumer Price Index as a measure of variations in prices of goods and services affecting a high proportion of the expenditure of wage earner households in the aggregate.



The tenth series of the index was introduced in June quarter 1982 with a weighting pattern based on estimated household expenditure in 1979-80 and a reference base 1980-81 = 100. There are 105 expenditure classes or groupings of like items within the index and each class has its own weight or measure of relative importance. In calculating the index, price changes for the various expenditure classes are combined using these weights. The weighting pattern for the average of the eight capitals used in the tenth series is shown in the next table.

**Consumer Price Index: Weighting Pattern**  
**Average Eight Capital Cities**

Group	Percentage Contribution to the All Groups Total
Food .....	21.287
Clothing .....	7.826
Housing .....	13.508
Household equipment and operation .....	13.627
Transportation .....	16.377
Tobacco and alcohol .....	8.455
Health and personal care .....	7.503
Recreation and education .....	11.417
All Groups .....	100.000

The wide range of commodities and services in the Consumer Price Index are arranged in eight major groups, with index numbers compiled for each of these groups as well as a total for all items. Index numbers for Adelaide for these individual groups and for 'All Groups' are recorded in the next table.

**Consumer Price Index, Adelaide**  
**(Base Year: 1980-81 = 100.0)**

Quarter	Food	Clothing	Housing	Household Equipment and Operation	Transportation	Tobacco and Alcohol	Health and Personal Care	Recreation and Education (a) (b)	All Groups
1982:									
March .....	109.2	107.8	111.8	111.8	111.8	110.1	127.9	100.0	111.7
June .....	111.4	110.3	114.5	115.3	116.2	112.0	129.2	101.0	114.4
September .....	114.5	111.6	117.8	118.5	120.1	117.5	147.3	103.3	118.6
December .....	117.1	114.3	122.8	122.7	122.5	122.8	149.7	104.8	121.8
1983:									
March .....	119.0	115.2	125.6	124.8	127.9	124.3	161.2	108.2	125.2
June .....	125.1	118.9	127.4	127.1	129.2	127.8	167.7	110.2	128.5
September .....	125.9	119.0	129.2	128.3	132.9	131.4	168.9	111.5	130.3
December .....	126.0	119.9	134.3	131.6	137.2	138.6	170.0	112.2	132.9
1984:									
March .....	128.4	121.3	138.8	134.8	138.0	142.2	134.8	114.8	132.9
June .....	128.6	124.9	142.5	136.4	138.8	146.3	115.4	114.6	133.1
September .....	131.6	125.8	145.0	136.8	140.3	148.3	115.8	115.4	134.7
December .....	134.0	129.0	150.0	139.5	142.9	151.9	118.2	116.0	137.5

(a) New group index replacing former Recreation group.

(b) Base: March quarter 1982 = 100.0.

The 'All Groups' index for Adelaide is shown in the following table with that for each of the other capital cities. The geographic coverage of the index was expanded to include a full index for Darwin from 1980-81. It is emphasised that these numbers reflect changes in prices within each individual city, but they do *not* measure differences in the level of prices between cities, and the Consumer Price Index should *not* be regarded as a 'cost of living' index.

## Consumer Price Index, Adelaide and Other Capital Cities

(Base Year: 1980-81 = 100.0)

Year	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Canberra	Darwin	Eight Capital Cities (a)
1974-75 .....	54.9	54.3	54.6	54.4	53.1	53.8	54.5	..	54.5
1975-76 .....	62.0	61.3	61.7	61.0	60.6	61.3	61.4	..	61.5
1976-77 .....	69.6	70.1	70.5	70.5	70.2	70.2	69.8	..	70.1
1977-78 .....	75.8	77.0	77.1	77.5	77.8	77.1	76.1	..	76.7
1978-79 .....	82.4	83.1	83.4	83.2	84.1	83.1	82.3	..	83.0
1979-80 .....	91.1	91.4	91.5	91.6	91.9	91.6	91.1	..	91.4
1980-81 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1981-82 .....	110.2	110.4	110.7	110.5	111.2	110.0	110.7	111.1	110.4
1982-83 .....	123.4	122.8	122.9	123.5	122.5	121.8	124.0	123.1	123.1
1983-84 .....	130.9	132.1	131.7	132.3	131.0	130.0	132.3	130.2	131.6

(a) Weighted average of six capital cities until 1979-80.

## Household Expenditure Surveys

During the financial years 1974-75 and 1975-76, the Australian Bureau of Statistics conducted two surveys in order to obtain information about the expenditure patterns of private households. Apart from limited attempts in 1910-11 and 1913 to assess the spending patterns of Australian households, these surveys were the first official collections of household expenditure statistics conducted in this country.

The collection of data relating to expenditure at the household level is important in providing information for use in improving the representativeness of the items and the weighting pattern used to compile the Consumer Price Index.

The 1975-76 survey sampled 5 869 households in all regions of Australia. Only private dwellings were sampled, including houses, home units, flats, caravans, tents and any other structures being used as private places of residence at the time of the survey. Hotels, boarding houses, institutions, etc. were defined as special dwellings outside the scope of the survey.

Information was collected on a household basis rather than for selected individuals in the population, because many items of expenditure such as food, accommodation and household goods and appliances relate to the household as a unit.

All categories of households (or persons) in selected private dwellings were included in the survey except: foreign diplomats and their staff; foreign servicemen and their families stationed in Australia; persons from overseas countries touring or holidaying in Australia; visitors staying with the household for less than six weeks after the initial interview (four weeks in the 1974-75 survey); usual residents absent at the time of the initial interview and not returning within seven days; and usual residents who were going away during the first half of the diary keeping and not returning before the end of diary keeping.

Each household was asked for details of large or infrequent items of expenditure (*e.g.* purchase of vehicles and property, and the payment of household bills such as electricity and gas) and for details of income from all sources. In addition, a diary was provided to each household member aged fifteen years or more, in which they were requested to record, on a daily basis, a description and value of all items purchased over the following two weeks. Because of anticipated differences in spending patterns in rural areas compared with metropolitan and other urban areas, members of rural households selected in the 1975-76 survey were issued with four-week diaries.

In the lower income ranges, average expenditure exceeded average income as defined (this does not imply that all households in the lower income ranges have expenditure which exceeds income), while in the higher income ranges average income substantially

exceeded average expenditure. It should be noted that some households will have financed some items of expenditure from savings and from other sources such as loans, receipts of maturing insurance policies, gifts, windfall gains and profits from the sale of assets which are not included as income as defined for the survey. In addition, some households classified to the lower income ranges may have had lower than usual income during the data reference period, while still maintaining their normal level of expenditure. For the medium and higher income ranges, income tax payments (included in other payments) are a large part of the difference between income and expenditure as defined.

The larger items of average weekly household expenditure in 1975-76 were transport and communication (\$32.42), food (\$31.93), and current housing costs (\$19.80).

### Household Expenditure by Household Income, South Australia, 1975-76

Particulars	Weekly Household Income						All Households
	Under \$80	\$80-\$139	\$140-\$199	\$200-\$259	\$260-\$339	\$340 or more	
Number of households in sample ...	104	85	107	96	81	77	550
Estimated total number of households in population ('000) .....	64.3	53.3	71.0	69.6	58.8	57.6	374.6
Average number of persons per household .....	1.64	2.23	3.16	3.01	3.36	3.75	2.86
Average age of household head (yrs) .....	62.32	49.38	41.01	40.83	38.42	43.61	45.82
Average weekly household income (\$)	54.16	112.05	168.24	227.50	291.79	468.62	217.27
Commodity or service:	Average Weekly Household Expenditure (\$)						
Current housing cost (a) .....	7.51	13.15	17.58	22.37	26.60	32.38	19.80
Fuel and power .....	2.15	2.53	4.69	3.63	3.02	4.32	3.43
Food .....	17.06	21.36	32.02	33.74	38.84	48.97	31.93
Bread, cakes and cereals .....	2.44	2.45	4.03	3.80	4.26	4.65	3.62
Meat and fish .....	4.45	5.14	7.29	7.51	7.96	10.88	7.20
Dairy products, oils and fats ...	2.81	3.56	5.08	4.70	4.68	6.30	4.53
Fruit and vegetables .....	2.68	2.89	4.38	4.27	4.55	6.57	4.22
Other food .....	4.68	7.32	11.24	13.47	17.38	20.58	12.37
Alcohol and tobacco .....	1.86	7.96	7.87	9.06	12.20	17.01	9.16
Clothing and footwear .....	4.74	7.02	10.25	15.91	18.90	29.60	14.23
Household equipment and operation .....	6.07	9.13	11.96	21.69	30.64	24.70	17.25
Medical care and health expenses .....	2.14	4.73	5.93	5.48	5.23	8.84	5.36
Transport and communication ...	14.19	26.08	27.67	31.68	48.61	48.84	32.42
Recreation and education .....	3.65	8.19	13.82	20.61	30.32	27.70	17.26
Miscellaneous goods and services .....	5.48	9.13	10.16	16.02	17.36	27.07	14.03
Total expenditure .....	64.84	109.29	141.94	180.20	231.73	269.43	164.87
Selected other payments (b) .....	8.64	14.96	26.22	49.52	56.69	97.54	41.68

(a) Included in current housing costs are both principal and interest components of any housing loan repayments.

Excluded are outright purchase of, or deposit on, dwellings or land, and other payments of a capital nature.

(b) The main components of this item are income tax, superannuation contributions, life insurance premiums, purchases of and deposits on dwellings and land, and gambling payments. Receipts from sales of dwellings and land, and gambling winnings, are offset against payments.

Further details on methodology and definitions may be obtained from the bulletin *Household Expenditure Survey 1974-75, Bulletin 1, 'An Outline of Concepts, Methodology and Procedures'* (Catalogue No. 6507.0).

### OTHER PRICE INDEXES

At December 1981 the following indexes covering non-retail sectors of the economy had been prepared and published by the Australian Statistician:

Export Price Index,  
 Import Price Index,  
 Price Index of Metallic Materials Used in the Manufacture of Fabricated Metal Products,  
 Price Index of Copper Materials Used in the Manufacture of Electrical Equipment,  
 Price Index of Materials Used in Manufacturing Industry,  
 Price Index of Articles Produced by Manufacturing Industry,  
 Price Index of Materials Used in House Building,  
 Price Index of Materials Used in Building Other than House Building.

Separate State figures are published for the latter two indexes, and these are further explained below. Details of the other indexes are available in bulletins published by the Australian Statistician and, in addition, a brief explanation of the Price Index of Articles produced by Manufacturing Industry was included in the *South Australian Year Book* 1977.

### Price Index of Materials Used in House Building

This index was introduced in November 1970. It measures changes in prices of selected materials used in the construction of houses. It is a fixed weights index, the composition of which is in accordance with the usage of materials in actual houses which were selected as representative for the purpose. The index does not purport to represent buildings of any kind other than houses.

Although the reference base of the index is given as 1966-67, the same as that previously given for the Price Index of Materials Used in Building Other than House Building, much of the weighting reflects usage of material used in house building, in 1968-69 when the weighting source data were collected. Each State capital city has a unique weighting pattern which reflects the difference in the estimated relative importance of given items between cities.

Prices are collected at the mid-point of the month to which the index refers, or as near thereto as practicable. They relate to specified standards of each commodity and are obtained in all State capital cities from representative suppliers of materials used in house building.

Further information concerning the method of compiling the index, as well as more detailed group index numbers and the separate weighting patterns for the six State capital cities may be found in the publication *Price Index of Materials Used in House Building* (Catalogue No. 6408.0). A full description of the Index is also given in the *Labour Report* No. 58, 1973, and the *Year Book Australia*.

The following table shows, for separate groups of materials and all groups combined, the index numbers for Adelaide and the weighted average index numbers for the six State capital cities.

**Price Index of Materials Used in House Building**  
 (Base of each Index: 1966-67 = 100·0)

Group	Adelaide			Weighted Average Six State Capital Cities		
	1981-82	1982-83	1983-84	1981-82	1982-83	1983-84
Concrete, etc. ....	437·6	500·7	520·7	373·8	430·9	451·3
Cement products ....	484·7	569·5	614·0	438·4	497·2	534·5
Clay bricks, tiles, etc. ....	435·7	501·3	550·2	374·0	416·2	446·7
Timber, board, etc. ....	481·3	535·3	581·9	406·8	434·2	473·3

**Price Index of Materials Used in House Building**  
(Base of each Index: 1966-67 = 100·0) (continued)

Group	Adelaide			Weighted Average Six State Capital Cities		
	1981-82	1982-83	1983-84	1981-82	1982-83	1983-84
Steel products .....	444·5	499·9	534·8	434·9	485·4	519·3
Other metal products .....	312·1	339·1	373·4	343·1	372·3	405·7
Plumbing fixtures, etc. ....	362·0	384·4	420·6	351·5	373·2	406·4
Electrical installation materials	326·3	371·9	411·6	345·9	395·8	442·9
Installed appliances .....	293·0	313·7	325·5	263·9	282·7	291·3
Plaster and plaster products .....	300·4	344·0	358·4	273·1	317·8	332·5
Miscellaneous materials .....	379·5	425·3	460·5	348·2	377·6	406·1
<b>All Groups .....</b>	<b>427·2</b>	<b>480·2</b>	<b>519·2</b>	<b>377·7</b>	<b>413·6</b>	<b>445·7</b>

The 'All Groups' index for Adelaide and each of the other State capitals is shown in the following table. It is emphasised that these numbers reflect price changes within each individual city, but they do not measure differences in the level of prices between cities.

**Price Index of Materials Used in House Building**  
**All Groups, State Capital Cities**  
(Base of each Index: 1966-67 = 100·0)

Year	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Weighted Average Six State Capital Cities
1979-80 .....	309·5	283·4	315·0	338·5	299·4	304·2	302·9
1980-81 .....	347·6	324·7	363·7	386·1	337·6	338·2	344·0
1981-82 .....	378·2	354·9	407·2	427·2	373·0	371·7	377·7
1982-83 .....	407·6	392·0	477·1	480·2	407·9	405·5	413·6
1983-84 .....	433·1	430·3	483·1	519·2	434·6	439·4	445·7

**Price Index of Materials Used in Building Other than House Building**

This index was introduced in April 1969. (The composition and weighting of the index has been reviewed and a new series from 1979-80 replaces the previous index which had a reference base of 1966-67 = 100·0). It measures changes in prices of selected materials used in the construction of buildings other than houses and low-rise flats. It is a fixed weights index, the composition of which is in accordance with the materials usage in building projects selected as representative for the purpose. Such usage was derived from reported values of each material used in construction of buildings other than houses commenced in the six State capital cities in the three years ended June 1977. The reference base of the index is the year 1979-80 = 100·0. The weighting base corresponds broadly with the reference base, but does not exactly coincide because of the nature of the data from which the weights were derived.

Prices are collected at the mid-point of the month to which the index refers, or as near thereto as practicable. They relate to specified standards of each commodity and are obtained in all State capital cities from representative suppliers of materials used in building.

Index numbers for separate groups of materials and the 'All Groups' index for Adelaide and each of the other State capitals are shown in the following tables. These numbers reflect price changes within each individual city, but they do not measure differences in the level of prices between cities.

**Price Index of Materials Used in Building Other than House Building**  
(Base of each Index: 1979-80 = 100.0)

Group	Adelaide			Weighted Average Six State Capital Cities		
	1981-82	1982-83	1983-84	1981-82	1982-83	1983-84
Clay bricks .....	138.9	161.2	175.1	127.4	142.6	151.6
Ready mixed concrete .....	135.9	156.5	163.2	123.7	143.3	149.5
Precast concrete products .....	133.1	152.6	162.6	125.4	141.1	150.0
Galvanised steel decking, cladding, etc. ....	125.4	140.8	150.2	127.3	138.7	145.5
Structural steel .....	133.0	150.9	154.6	128.1	138.9	141.5
Reinforcing steel bar, fabric and mesh .....	127.4	140.6	147.8	126.4	139.0	149.2
Aluminium windows .....	134.0	157.9	172.4	126.3	136.2	144.2
Sand, aggregate and filling .....	137.4	151.0	156.9	140.2	167.1	177.9
Special purpose index (a) .....	129.3	146.3	155.2	126.1	140.1	147.8
All electrical materials .....	121.4	136.8	145.1	121.9	137.4	146.5
All mechanical services .....	121.2	136.6	145.1	123.5	138.3	146.5
All plumbing materials .....	120.5	135.2	146.9	122.1	136.1	146.4
All Groups .....	127.3	144.0	152.7	125.4	139.6	147.4

(a) All groups excluding electrical installation materials and mechanical services components.

**Price Index of Materials Used in Building Other than House Building**  
**All Groups, State Capital Cities**  
(Base of each Index: 1979-80 = 100.0)

Period	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Weighted Average Six State Capital Cities
1980-81 .....	113.1	112.7	113.2	113.8	112.2	111.6	112.9
1981-82 .....	126.6	123.5	126.3	127.3	123.8	122.9	125.4
1982-83 .....	141.1	135.9	141.4	144.0	138.4	135.9	139.6
1983-84 .....	148.3	143.4	151.9	152.7	145.6	145.7	147.4

Further information on the method of compiling the index may be found in the publication *Price Index of Materials Used in Building Other than House Building* (Catalogue No. 6407.0). A full description of the index is in *Labour Report* No. 58, 1973.

## COMMODITY PRICES

### Retail Prices of Food

The next table shows the average retail prices of selected food items in Adelaide during recent years. Items included are those which are considered identical or sufficiently comparable from place to place to warrant publication of comparative prices.

**Average Retail Prices of Selected Food and Grocery Items, Adelaide**  
**December Quarter**

Item	Unit	1980	1981	1982	1983	1984
Cents						
Milk, bottled, delivered .....	2x600 mL	55	62	72	76	77
Cheese, processed .....	500 g	(a) 69	144	166	(b) 234	(b) 194
Butter .....	500 g	110	130	150	160	148
Bread, white loaf, sliced, supermarket sales .....	680 g	65	74	83	81	85
Biscuits, dry .....	250 g	56	63	72	76	78
Breakfast cereal, corn based .....	500 g	90	96	107	120	135
Flour, self-raising .....	1 kg	49	55	59	(c) 121	(c) 134
Rice .....	500 g	36	43	43	(d) 74	(d) 73



**Average Retail Prices of Selected Food and Grocery Items, Adelaide  
December Quarter (continued)**

Item	Unit	1980	1981	1982	1983	1984
Cents						
<b>Beef:</b>						
Rib (without bone) .....	1 kg	394	398	412	458	491
Rump steak .....	1 kg	684	678	691	750	802
Corned silverside .....	1 kg	468	448	449	505	505
Sausages .....	1 kg	239	249	263	288	283
<b>Lamb:</b>						
Leg .....	1 kg	332	336	335	331	341
Loin chops .....	1 kg	357	401	383	382	415
Forequarter chops .....	1 kg	310	325	302	287	330
<b>Pork:</b>						
Leg .....	1 kg	421	456	486	481	489
Chops .....	1 kg	459	517	569	566	581
Chicken, frozen .....	1 kg	244	270	276	283	263
Bacon, middle rashers, pre-packed .....	250 g	164	189	207	195	190
Salmon, pink .....	220 g	121	128	130	132	146
Potatoes .....	1 kg	60	71	60	87	58
Onions .....	1 kg	56	81	55	126	97
Peaches, canned .....	825 g	74	85	95	109	109
Peas, frozen .....	500 g	73	85	92	93	85
Eggs (55 grams) .....	doz.	146	160	178	186	178
Sugar .....	2 kg	95	99	112	125	130
Tea .....	250 g	73	76	82	109	141
Coffee, instant, jar .....	150 g	292	268	281	326	338
Tomato sauce .....	600 mL	(e) 48	82	95	104	100
Margarine, poly-unsaturated .....	500 g	97	101	100	112	114

(a) 250 g. (b) sliced, wrapped. (c) 2 kg. (d) 1 kg. (e) 300 mL.

### Other Commodity Prices

South Australian prices of agricultural products are shown in the table on page 385, and separate details of wheat, barley, wool and livestock are given under the appropriate headings in Part 9.1.

### PRICE CONTROL

Following the outbreak of the 1939-45 War the Commonwealth Government, acting under the authority of the National Security Act, established price control in Australia. A Commonwealth Prices Commissioner was appointed and given extensive powers in the regulation of prices. The National Security Act expired at the end of 1946 but temporary legislation provided for the continuation of price control until the end of 1948.

During 1948 the Commonwealth Government held a referendum seeking authority for permanent control over prices and rents. However, the proposal was rejected and the States agreed to assume responsibility for price control. In South Australia the necessary administrative structure was established by the Prices Act of 1948. Provision was made for the retention of existing Commonwealth Government price regulation orders altered in accordance with the State Act.

Under the provisions of the Prices Act, 1948-1985 the South Australian Department of Public and Consumer Affairs determines maximum prices for controlled goods and services and investigates complaints concerning excessive prices for goods and charges for services whether subject to price control or not. An exception to the determination of maximum prices of controlled goods and services is wine grapes where the minimum prices paid by wine makers to grape growers are fixed by the South Australian Prices Commissioner. The list of goods subject to price control was reduced following a review in 1979-80.

The Commonwealth Government held a further referendum in December 1973 seeking power to control the level of prices and incomes, but, as was the case in 1948, the proposal was rejected.

The Prices Justification Tribunal was established in August 1973 under the provisions of the *Prices Justification Act 1973*. The Tribunal was a fully discretionary body appointed under the Act to consider the justification for proposed price increases put to it by companies subject to the Act. It was not a price regulating authority.

The Tribunal consisted of a Chairman and such number of other members as were from time to time appointed in accordance with the Act. The Office of the Prices Justification Tribunal consisted of persons appointed or employed under the *Public Service Act 1922*.

The Prices Justification Tribunal ceased operations on 25 June 1981. All records relating to the production and supply of petroleum products as defined in the *Petroleum Products Pricing Act 1981* were transferred to the Petroleum Products Pricing Authority. This Act was repealed by the *Prices Surveillance Act 1983*, which was proclaimed on 19 March 1984. The Commonwealth Treasurer in that same month declared petroleum products as notified goods for the purposes of the Act and the first enquiry into prices of petroleum products commenced in April 1984. Since then enquiries have been held into Australia Post and Telecom charges and recently beer, cigarettes, float glass and concrete roofing tiles were declared as notified goods.

## RENT CONTROL

Rent control was introduced in South Australia at the beginning of the 1939-45 War, with the passing of the Increase in Rent (War Restrictions) Act, 1939, which pegged rents at the level prevailing at 1 September 1939. In 1942 this Act was replaced by the Landlord and Tenant (Control of Rents) Act. Although providing the same benchmark, this Act allowed the South Australian Housing Trust to determine a variation in rent, upon application by either the landlord or tenant, or in certain cases on its own initiative. An appeal against such a determination could be made to a Local Court. From the beginning of 1943 to the end of 1962, 60 180 applications for rent determinations were dealt with by the Trust, of which twenty-nine were varied by a Local Court.

Following an inquiry held in 1951 on the future of rent control, proportionate loadings were introduced to allow for increases in property costs since 1939. The gradual relaxation of rent control was achieved through periodic extensions of these loadings and through the exclusion of long-term leases from the provisions of the Act.

At the end of 1962 the Landlord and Tenant (Control of Rents) Act was replaced by the Excessive Rents Act, which in turn has been repealed and incorporated into the Residential Tenancies Act, which came into operation in December 1978. The Residential Tenancies Act introduced a general regulation of all aspects of the relationship between landlords and tenants. Administered by the Commissioner for Consumer Affairs, the Act established a Residential Tenancies Tribunal with exclusive jurisdiction to hear and determine a wide range of landlord and tenant disputes and empowered the Commissioner to investigate and report on all matters affecting the parties to residential tenancy agreements.

The Act also codified the existing common law of landlord and tenant by implying certain terms in all residential tenancy agreements. It proscribed undesirable practices by the creation of a range of offences and established prescribed procedures and forms covering the commencement, due performance and termination of agreements.

All security bonds received in tenancy agreements for premises within the Consolidated Metropolitan Development Plan must be paid to the Tribunal and lodged in the Residential Tenancies Fund.

#### Further References

Additional information may be found in the following publications:

- 6401.0 *Consumer Price Index—Australia*
- 6407.0 *Price Index of Materials Used in Building other than House Building—Australia*
- 6408.0 *Price Index of Materials Used in House Building—Australia*
- 6440.0 *A Guide to the Consumer Price Index—Australia*
- 6529.0 *1984 Household Expenditure Survey, Australia—Preliminary*

## 10.4 TRANSPORT

A network of sea, rail, road and air services has been established between South Australia and the other States of Australia. Transport between the eastern States and Western Australia, and to a lesser extent Northern Territory, is made *via* South Australian services. Distances between Adelaide and other Australian capital cities, and Darwin, are shown in the following table.

Distances Between Adelaide and Other Capital Cities

Method of Travel	Canberra	Sydney	Melbourne	Brisbane	Perth	Hobart	Darwin
Kilometres							
Road (a) ..	1 182	1 390	730	2 036	2 708	..	3 129
Rail .....	1 620	1 656	777	2 643	2 655	..	..
Sea .....	..	1 833	949	2 761	(b) 2 509	1 436	(c) 5 799
Air .....	988	1 196	660	1 967	2 216	1 283	2 766

(a) R.A.A. recommended routes. (b) To Fremantle. (c) *via* Fremantle.

## TRANSPORT CONTROL AND OPERATIONS

### STATE TRANSPORT AUTHORITY

The State Transport Authority is constituted as a body corporate under the State Transport Authority Act, 1974-1981. Some of the functions of the Authority described in the Act are:

- (a) to provide public transport services and to conduct operations for or related to the provision of public transport services;
- (b) to establish, maintain, extend, alter or discontinue public transport systems; and
- (c) such other functions;
  - (i) as are incidental or ancillary to the foregoing, or
  - (ii) may be assigned to the Authority by the Minister.

The services of the Authority may be provided within or outside the State.

The main role of the State Transport Authority set out in its corporate charter is:

- (a) to provide passenger transport services for the people of the Adelaide Metropolitan area, through an integrated network of bus, tram and rail routes which offers reasonable access, with emphasis on the large numbers of people who travel regularly and have similar destinations; and
- (b) in accordance with Government policy and with the resources available, the Authority will provide a level and standard of service, consistent with demand, in the most cost effective manner. It will actively plan and develop services and facilities required to serve the needs of its market.

Under the legislation, which was proclaimed in December 1975, the South Australian Railways, the Municipal Tramways Trust and the Transport Control Board were dissolved and the assets, powers and functions of each were transferred to the Authority. An additional function was also conferred on the Authority of ensuring, as far as practicable, that adequate public transport services are provided within the State. The Authority, through its direct control of State-operated services and its regulatory control of privately-operated bus services, was empowered to co-ordinate public transport services in the State and ensure the optimum utilisation of the transport resources available. This regulatory function was transferred to the Department of Transport (Road Safety and Motor Transport Division) in 1981.

From July 1975, by virtue of the Railways (Transfer Agreement) Act, 1975 and the *Railways Agreement (South Australia) Act 1975*, the Australian National Railways Commission acquired the non-metropolitan portion of the South Australian Railways, i.e. the country and interstate passenger services and all freight services, subject to a number of conditions and controls exercised by the State. Facilities within the metropolitan area concerned with the handling of freight and the servicing and repair of rollingstock also became the property of the Commission. The State Transport Authority's railway system extends generally from Adelaide to the extremities of the metropolitan area at Outer Harbor, Gawler Central, Belair and Noarlunga Centre and includes interconnecting loops and branch lines. Under the terms of the Act the Commission and the Authority have the right to run their rollingstock over the railways of each other and the Commission is required to make available to the Authority, so far as is practicable, such numbers of employees as are agreed from time to time for work on the State metropolitan railway system. Separate agreements have been made between the two organisations which detail the terms and conditions of these arrangements.

The Authority continued to operate the South Australian non-metropolitan railways on behalf of the Commission until 1 March 1978, when management responsibility was transferred to the Commission. On the same date the former Rail Division and Bus and Tram Division of the Authority were merged, allowing the Authority to operate metropolitan public transport services as an integrated organisation.

Further amendments were made to the State Transport Authority Act, 1974-1981 on 19 November 1981 and the Bus and Tramways Act, 1935-1978 and the Railways Act, 1936-1979 were repealed.

Commencing on 12 February 1984, a reorganisation of Adelaide's transport, services affecting the city's train and bus travellers, came into operation.

The change was the biggest to occur on one day in Adelaide's public transport history and involved improved integration of bus and train services; changes in and extension of bus routes and 'feeder' services to trains; introduction of 'fast' and 'express' codes and redesign of services to better co-ordinate and improve travel options for users.

The following table lists selected non-financial details for the years 1982-83 and 1983-84 and the next table shows income and expenditure for 1983-84.

## State Transport Authority: Selected Non-financial Details

Particulars	Unit	1982-83	1983-84
Passenger journeys .....	'000	67 510	69 680
Traffic vehicle kilometres run:			
Bus .....	'000 km	38 453	38 607
Tram .....	'000 km	756	751
Rail .....	'000 km	9 832	9 420
Total route kilometres:			
Bus .....	km	965·14	968·41
Tram .....	km	11·38	11·38
Rail .....	km	152·09	152·77
Vehicle fleet at 30 June:			
Buses (a) .....	No.	767	757
Tramcars .....	No.	22	22
Rail power cars .....	No.	118	116
Rail trailer cars .....	No.	42	39
Number of employees at 30 June (b) .....	No.	3 486	3 534

(a) Includes charter and tour buses.

(b) Includes staff made available by Australian National.

## State Transport Authority: Income and Expenditure, 1983-84

		\$'000
Income:		
Traffic receipts .....	43 596	
Sundry receipts .....	4 714	
Interest on investments .....	1 967	
Total income .....		50 277
Operating cost:		
Traffic operation .....	44 464	
Maintenance .....	29 767	
Administration and general expenses .....	20 939	
Fuel, oil and power .....	10 139	
Depreciation .....	5 173	
Amortisation of leased property .....	3 216	
Interest on loans .....	8 108	
Interest on leases .....	4 321	
Total operating cost .....		126 127
Excess of operating cost over income .....		75 850
Contributions from South Australian Government .....		68 800
Excess of expenditure over income .....		7 050

From the beginning of the financial year 1978-79 State Transport Authority accounts are prepared on a combined basis with no financial differentiation between rail, bus and tram operations. However, non-financial data is collected for each transport mode.

## METROPOLITAN PRIVATE MOTOR BUS SERVICES

At 30 June 1984, there were four private bus services licensed to operate wholly within the Adelaide metropolitan area. These services operate over a total route length of 132 kilometres. A large number of private bus licensees operate a varied fleet of vehicles within the State, ranging from mini buses to luxury coaches and provide services for the carriage of school children, charter parties, tours and special exercises.

## ROAD PASSENGER TRANSPORT CONTROL

### Private Services

Legislation covering the regulation of private bus operations in South Australia is included in Part IVB of the Road Traffic Act, 1961-85, and is enforced by the Department of Transport's Division of Road Safety and Motor Transport.

Private operations are regulated *via* a licensing system which includes the issuing of licences authorising route service, tour and charter, community bus, school children and other special categories. Route service licences have a currency of seven years, with other licences having varied tenures ranging from single trip periods up to twelve months.

At 30 June 1984, current route service licences numbered thirty. During the year ended 30 June 1984, 141 charter licences, 224 school bus and handicapped children's bus licences, nine workmen's bus licences, fifty-four special tourist licences, sixty-four school councils (restricted charter) and three regular tourist licences were issued. In addition, four interstate services were licensed to carry passengers in remote areas where alternative services were not available. Other licences issued during the period (*i.e.* authorising shoppers' services, airline ground services, community services and miscellaneous operations) totalled sixty-two.

### Country Town Bus Services

Commencing in May 1975, the State Government offered financial assistance through local government, to urban bus services outside the metropolitan area. Under the arrangement, financial responsibility for the provision of bus services is vested in the local government authority, but the State Government contributes two-thirds of the operating loss.

Councils have the option of acquiring local bus fleets or arranging for a local bus proprietor to provide the bus service under contract. In the case of the contract system, the fare revenue is retained by the local government authority and the contractor is paid an agreed sum per kilometre to operate buses on routes and within specified timetables determined by a three-person management committee. The committee consists in each case of an elected Council representative, the Town Clerk or his deputy, and a representative of the State Government.

Contract services are operated in Port Pirie, Port Augusta, Port Lincoln and Mount Gambier. In Whyalla the City Council purchased the assets of the former bus proprietor and since 30 October 1975 the bus service has been municipally owned and operated.

### Interstate and Country Services

Regular interstate coach services and special charters and tours operate to all mainland States. In addition, a network of bus route services operates on radial routes from Adelaide to all parts of the State. These services are provided by twelve private companies, under licences issued by the Division of Road Safety and Motor Transport and are operated from two adjacent terminals situated in Franklin Street, Adelaide. The services operate over a total route length of 13 500 kilometres.

Intrastate passenger route services on all routes are controlled by the Division of Road Safety and Motor Transport. Generally, pick-up and set-down rights on the routes are non-competitive with other route service operations. The Division also regulates tour and charter operations within the State.

### TAXI-CABS

The Metropolitan Taxi-Cab Act, 1956-1978, administered by the Metropolitan Taxi-

Cab Board, is the governing legislation providing for the control of taxi-cabs and hire cars within the Metropolitan Planning Area as defined by Section 5(1) of the Planning and Development Act, 1966-1978, together with the whole of the Municipality of Gawler and from 2 September 1982 the district council area of Mount Barker. The Board is responsible for the granting of licences or permits to operate taxi-cabs, the allotment of vehicles to stands and the charging of permit fees.

Regulations under the Act provide for the examination of taxi-cabs: all taxi-cabs are examined for roadworthiness, and all meters are checked and tested twice a year on the Board's premises by mechanics employed by the Board. It is compulsory for taxi-cabs to be fitted with meters which record progressively the cost of each journey at rates prescribed from time to time. From 2 July 1984 the rates are \$1.20 for 'flag fall' and the first 178 metres, then 10 cents each additional 178 metres and waiting time \$12.30 per hour. From 7 p.m. to 6 a.m. Monday to Friday and from 1 p.m. Saturday to 6 a.m. Monday and on public holidays the rates are \$1.20 'flag fall' and the first 156 metres, then 10 cents for each additional 156 metres and waiting time \$12.30 per hour. For journeys which extend beyond the Metropolitan Planning Area radius contract rates, not to exceed 37 cents per outward and return kilometre, are charged. Hire car fares are by contract between the driver and the hirer.

Licences issued at 30 June 1984 include taxi-cabs, white plates (*i.e.* restricted) 250; green plates 595; hire cars 59; and funeral cars 15. Drivers licences current totalled 2 730.

Taxi licence fees are \$81 a year and private hire licence fees are \$65. Revenue received by the Board during 1983-84 was \$68 445 from taxi licences, \$4 062 from hire car licences and \$70 289 from drivers licences. Total revenue from all sources was \$302 880, and expenditure was \$291 945.

## MOTOR VEHICLES

### Control of Road Traffic

Legislation covering the registration of motor vehicles, licensing of drivers and third party insurance in South Australia is contained in the Motor Vehicles Act, 1959-1985.

The present legislation for the control of road traffic in South Australia is set out in the Road Traffic Act, 1961-1985 and the Motor Vehicles Act, 1959-1985.

### New Motor Vehicle Registration

New motor vehicle registrations during the financial years 1979-80 to 1983-84 are shown in the following table.

New Motor Vehicle Registrations, South Australia <sup>(a)</sup>

Type of Vehicle	1979-80	1980-81	1981-82	1982-83	1983-84
Cars and Station wagons .....	38 074	36 629	36 890	39 554	41 204
Utilities .....	2 643	2 942	2 926	2 723	3 113
Panel vans .....	2 100	2 506	3 063	3 696	3 498
Trucks .....	3 201	3 182	3 213	2 352	2 735
Other truck type vehicles (b) .....	156	161	204	164	197
Buses .....	206	270	222	258	226
Motor cycles .....	5 518	6 596	7 050	5 833	4 671
Total .....	51 898	52 286	53 568	54 580	55 644

(a) Includes Commonwealth Government owned vehicles except defence services vehicles.

(b) Includes truck type vehicles not designed for freight carrying *e.g.* tow trucks and fire engines; and ambulances and hearses.

### Registration of Motor Vehicles

Under the provisions of the Motor Vehicles Act, 1959-1985 all motor vehicles, unless specifically exempted, must be registered with the Registrar of Motor Vehicles at the Motor Registration Division of the Department of Transport before being driven on any road.

The Motor Vehicles Act defines a motor vehicle as:

- (a) a vehicle, tractor or mobile machine driven or propelled by a steam engine, internal combustion engine, electricity or any other power not being human or animal; or

- (b) a caravan or a trailer;

but does not include a vehicle run upon a railway or tramway or a mobile machine controlled and guided by a person walking.

Permits to use vehicles, without registration, between farm blocks may be granted by the Registrar. A fourteen-day permit to drive a motor vehicle pending registration may be issued, under certain circumstances, by a member of the police force stationed at a police station more than forty kilometres from the GPO, Adelaide, except in those places where a branch of the Motor Registration Division is in operation.

From 1 April 1984 registration fees for motor cars and station wagons and all other non-commercial vehicles with an unladen mass of up to 2 000 kilograms are based on the number of cylinders. Fees for non-commercial vehicles exceeding 2 000 kilograms and all commercial vehicles are based on unladen mass. A flat fee is payable for all motor cycles and all trailers respectively.

Motor vehicles used for certain purposes are registered without fee, *e.g.* vehicles owned by the Fire Brigades Board and other firefighting organisations, ambulances (for the use of which no charge is made), council vehicles used solely or mainly for the collection and transport of household refuse, etc. Registration at reduced rates is allowed for primary producers' commercial vehicles and tractors, prospectors' vehicles and for vehicles used wholly or mainly in outer areas. Reduced rates are available to incapacitated ex-service personnel also, and to some persons who, as holders of State Concession Cards or pensioner entitlement cards, are entitled to travel on public transport in South Australia at reduced fares. Vehicles used solely for interstate trade can be registered for \$10 for a period of twelve months.

The Act provides for registered vehicles to carry number plates and for a registration label to be affixed to each registered vehicle. It also provides for the issue of general traders plates and limited traders plates.

### Motor Vehicles on Register

The following table shows the number of motor vehicles on the register at 30 June from 1980 to 1984.

Motor Vehicles on Register, South Australia <sup>(a)</sup> , at 30 June					
Type of Vehicle	1980	1981	1982	1983	1984
			'000		
Cars .....	476.7	484.2	494.1	502.9	516.2
Station wagons .....	78.2	80.7	85.1	90.4	97.7
Commercial vehicles .....	120.0	123.8	129.0	132.6	138.6
Motor cycles .....	33.7	36.7	36.6	37.8	37.7
Total on register .....	708.6	725.4	744.7	763.7	790.2



**Motor Vehicles on Register, South Australia <sup>(a)</sup>, at 30 June (continued)**

Type of Vehicle	1980	1981	1982	1983	1984
Population per vehicle .....	1.85	1.82	Persons 1.78	1.76	1.71
Tractors, plant, equipment .....	6.4	7.2	7.0	7.2	6.7
Trailers and caravans .....	158.1	162.9	166.9	168.9	174.9
Traders plates .....	3.0	2.9	2.9	2.9	3.0

(a) Includes Commonwealth Government owned vehicles except defence services vehicles.

**Drivers Licences**

From 19 March 1979, the following classes of drivers licences have applied in South Australia:

- Class 1: to drive (a) any motor car or (b) any motor vehicle, the mass of which (excluding the mass of any trailer) does not exceed 3 000 kilograms, except an articulated motor vehicle, a motor cycle or a motor omnibus;
- Class 2: to drive any motor vehicle except an articulated motor vehicle, a motor cycle or a motor omnibus;
- Class 3: to drive any motor vehicle except a motor cycle or a motor omnibus;
- Class 4A: to drive any motor cycle up to 250 cubic centimetres engine capacity;
- Class 4: to drive a motor cycle;
- Class 5: to drive a motor omnibus.

A licence may be endorsed with more than one class number.

The Motor Vehicles Act provides that an applicant must apply for a permit to learn to drive a motor vehicle and will be issued with a learners permit once he or she has passed a written examination on the rules of the road. The permit is for a period not exceeding six months during which time the holder is expected to undergo a practical test conducted by a Motor Registration Division examiner. As from 1 June 1980 learner drivers who pass the practical driving test are issued with a licence, for one year, for the class of vehicle in which the test was passed, endorsed with probationary conditions. These conditions are:

- (1) must display 'P' plates clearly visible from the front and rear of the vehicle (rear only for motor cycles),
- (2) must not drive a motor vehicle on a road in any part of the State at a speed exceeding 80 kilometres per hour,
- (3) must not drive a motor vehicle or attempt to put a motor vehicle in motion where there is present in his blood the prescribed concentration of alcohol.

The same conditions apply to holders of learners permits except that 'L' plates must be displayed.

Provision is also made for the testing of drivers suspected of being incompetent or suffering from a disease or disability which may impair their ability to drive, and for the suspension of their licences should they fail the test. Persons who will reach the age of seventy years during the currency of their next licence are tested before that licence is issued and also at age 73, 76, 79 and annually thereafter. Medical and optical tests are also imposed from age seventy years on an annual basis before renewal of the licence.

Drivers attract demerit points for contravention of various sections of the Road Traffic Act. The offences that attract points have been carefully selected with a view towards road safety. Points allotted range from six for serious offences down to one for minor offences.

In 1984 warning notices were sent to 35 798 drivers who had accumulated six or more points in the previous three years and 5 322 drivers with twelve or more demerit points had their drivers licence suspended for a period of three months.

From July 1977 all drivers were issued with three-year licences except those aged 70 years and over who continue renewing their licences annually (fee \$10) subject to passing the required tests. The fee for a learners permit is \$5 per three-month period. Licences and permits are not issued to persons under sixteen years of age.

In 1961 licences for motor driving instructors were introduced and are compulsory where instruction is given for reward. The licence fee is \$50 for a period of three years.

Drivers and riders licences current at 31 December 1984 totalled 814 046. The number in force first exceeded 100 000 in 1931, exceeded 300 000 by 1957, 500 000 by 1969, and had exceeded 700 000 by 1978.

### **Revenue from Registrations and Licences**

Revenue from registration fees and drivers licence fees totalled \$61 313 097 in 1983-84 compared with \$58 608 000 in 1982-83. Registration fees were increased by 10.0 per cent from 15 October 1984. Licence fees were increased from \$8 per annum to \$10 per annum from 15 October 1984.

These fees are paid into Consolidated Revenue Account, but after deductions have been made for sinking fund and interest on loans raised for roads and bridges, and the administration expenses of the Highways Department and Motor Registration Division of the Department of Transport, the balance is paid into the Highways Fund.

### **Third Party Insurance**

Under the Motor Vehicles Act, 1959-1983 every motor vehicle driven on a road, unless specifically exempted, must be covered by an insurance policy. This policy insures the owner of the motor vehicle and any other person who at any time drives the vehicle in respect of all liability that may be incurred in respect of the death of, or bodily injury to, any person caused by, or arising out of the use of the vehicle in any part of Australia.

Insurance must be effected with the State Government Insurance Commission, which is now the only approved third party insurer. Liabilities of the insurer, set out in the Motor Vehicles Act, include the liability to pay for emergency treatment and hospital treatment to a person injured (including fatally injured) by or arising out of the use of an insured motor vehicle.

Where the driver of a motor vehicle has caused death or bodily injury in the use of that vehicle and the identity of the vehicle cannot be ascertained, then a person who could have obtained a judgment against the driver may recover by action against a nominal defendant appointed by the Minister of Transport and published in the Government Gazette. Payment by the nominal defendant is out of money contributed by the Commission.

A person claiming damages in respect of death or bodily injury caused by negligence in the use of an uninsured motor vehicle on a road may bring an action for the recovery of those damages against the nominal defendant. Payments made by the nominal defendant are recoverable from the driver of the motor vehicle or any person liable for the negligence of that driver.

An injured person may claim against his or her spouse where the spouse is an insured person and has caused that person bodily injury in the use of a motor vehicle.

A committee appointed by the Governor on the recommendation of the Minister of Transport having all the powers of a royal commission periodically inquires into and determines what premiums for third party insurance are fair and reasonable.

The following table shows the actual and increase in third party annual premiums for the main classes of motor vehicles effective from 6 February 1985.

**Increase in Third Party Premiums, South Australia, February 1985**

Class of Vehicle	Metropolitan Area (a)		Country Area	
	Increase	Premium	Increase	Premium
Private and business cars .....	\$	\$	\$	\$
Goods carrying vehicles not exceeding two tonnes .....	22	168	17	130
Goods carrying vehicles exceeding two tonnes .....	25	194	17	130
Primary producers and prospectors goods carrying vehicles .....	32	245	21	159
Taxi-cabs .....	10	76	9	39
Hire and drive-yourself cars .....	89	681	37	287
Omnibuses .....	37	287	37	287
Omnibuses not for hire, fare or reward .....	94	718	17	130
Motor cycles, engine capacity not exceeding 50 cc .....	13	102	7	51
Motor cycles, engine capacity not exceeding 250 cc .....	4	34	2	16
Motor cycles, engine capacity exceeding 250 cc .....	11	85	4	30
Miscellaneous vehicles:	36	275	17	128
Ambulances, tow trucks, mobile cranes, hearses, etc. ....	14	106	5	39

(a) Includes vehicles usually garaged within a radius of 40 kilometres of the GPO Adelaide.

### Road Traffic Board

The Road Traffic Board of South Australia, set up in 1960 under the provisions of the Road Traffic Board Act, 1960, is now constituted under the Road Traffic Act, 1961-1985. Its functions are to:

- (1) make recommendations to the Minister on roads and traffic generally, on the use of traffic control devices and other measures to be taken to prevent road traffic accidents;
- (2) promote uniformity in the design and use of traffic control devices;
- (3) conduct research and collect statistics relating to road traffic accidents and other traffic problems;
- (4) disseminate information and advice on road safety and traffic laws and regulations;
- (5) investigate and report on proposals for alterations of and additions to traffic laws and regulations.

### Motor Vehicle Usage

A survey was conducted throughout Australia in late 1982 for the purpose of gathering information on the usage of motor vehicles. The period covered by the survey was for the twelve months ended 30 September 1982. Previous surveys were conducted in 1963, 1971, 1976 and 1979.

The survey population (motor vehicles on the register), from which the sample was drawn, was extracted from the registration systems of the Commonwealth Government and State motor vehicle registration authorities. It was then stratified on the basis of vehicle type, trucks being further stratified by tare weight and number of axles.

Of the vehicles selected for the 1982 sample, 75 per cent were trucks, utilities and panel vans; 18 per cent cars, station wagons and motor cycles; and 7 per cent buses and minibuses. The emphasis on 'commercial' vehicles was necessary because of the diverse usage characteristics of commercial vehicles and because a major interest of users is in road freight transport.

### Motor Vehicle Usage: Average Annual Distance Travelled, South Australia, 1982

Type of Vehicle	Average Annual Distance Travelled		Average Annual Distance Travelled for Business Purposes	
	'000 km	SE %	'000 km	SE %
Cars and station wagons (a) .....	14.9	(2.0)	11.2	(5.0)
Motor cycles (b) .....	5.1	(6.2)	2.1	(13.3)
Utilities and panel vans .....	16.8	(8.5)	15.1	(11.1)
Trucks:				
Rigid;				
Under 3 tonnes .....	14.2	(3.6)	13.3	(3.7)
3 and under 4 tonnes .....	9.9	(3.8)	9.7	(3.8)
4 tonnes and over .....	16.5	(3.8)	16.2	(3.8)
Total rigid trucks .....	14.2	(2.3)	13.6	(2.4)
Articulated;				
Under 9 tonnes .....	14.5	(1.9)	14.5	(1.9)
9 and under 11 tonnes .....	35.7	(4.8)	35.5	(4.8)
11 tonnes and over .....	92.6	(3.9)	91.4	(3.9)
Total articulated trucks .....	78.2	(3.6)	77.3	(3.6)
Other truck type vehicles (c) .....	8.4	(15.1)	8.5	(15.1)
Total trucks .....	20.0	(2.2)	19.6	(2.3)
Total .....	15.0	(1.9)	13.3	(3.6)

(a) Includes cars, station wagons, minibuses. (b) Includes microvans.

(c) Includes only those vehicles classified as non-freight carrying trucks with a fixed load e.g. crane, cherry-picker.

The following table shows details of average annual fuel consumption for South Australia.

### Motor Vehicle Usage: Average Rate of Fuel Consumption, South Australia, 1982 <sup>(a)</sup>

Type of Vehicle	Average Rate of Fuel Consumption					
	Petrol		Diesel or Distillate		LPG or Dual Fuelled	
	Litres per 100 km	SE %	Litres per 100 km	SE %	Litres per 100 km	SE %
Cars and station wagons .....	12.3	(0.8)	12.0	(0.0)	19.1	(5.2)
Motor cycles .....	5.4	(2.7)	—	—	—	—
Utilities and panel vans .....	13.9	(4.1)	11.0	(9.5)	5.8	(15.8)
Trucks:						
Rigid;						
Under 3 tonnes .....	17.7	(1.4)	15.2	(3.5)	25.7	(11.0)
3 and under 4 tonnes .....	31.0	(1.8)	22.0	(3.4)	35.7	(4.2)
4 tonnes and over .....	37.7	(2.7)	32.0	(1.7)	75.6	(17.8)
Total rigid trucks .....	22.9	(1.5)	26.6	(1.9)	41.3	(14.9)
Articulated;						
Under 9 tonnes .....	43.7	(2.1)	33.4	(0.5)	21.9	(0.3)
9 and under 11 tonnes .....	47.9	(6.0)	41.1	(1.7)	25.6	(0.0)
11 tonnes and over .....	57.4	(11.3)	53.0	(1.7)	—	—
Total articulated trucks .....	46.0	(2.7)	52.1	(1.6)	24.3	(2.9)
Other truck type vehicles .....	30.5	(9.8)	50.5	(18.0)	—	—
Total trucks .....	23.6	(1.6)	41.4	(1.5)	41.2	(14.8)
Total .....	12.7	(0.9)	39.5	(2.6)	19.3	(12.8)

(a) Excludes other and not stated.

Being based on a sample, these statistics may differ from the figures which would have been obtained from a complete census using the same questionnaires and procedures. Measure of such imprecision, standard error (SE), is shown in the table as a percentage of the associated figure.

Additional details relating to South Australia and Australia are shown in the bulletin *Survey of Motor Vehicle Usage, Twelve Months Ended 30 September 1982* (Catalogue No. 9208.0).

### Census of Motor Vehicles

A census of motor vehicles on the register in Australia at 30 September 1982 was completed during 1983. Details relating to South Australia are shown in the bulletin *Motor Vehicle Census, 30 September 1982* (Catalogue No. 9301.4).

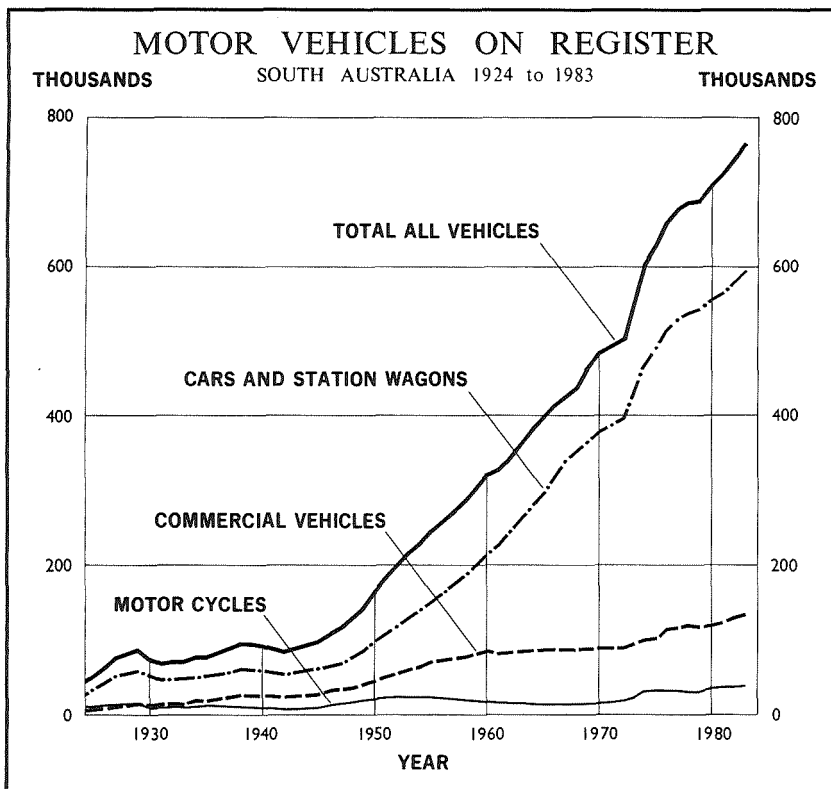
The next census of motor vehicles will be conducted at 30 September 1985. At the same time, a survey of motor vehicle usage for the twelve months ending 30 September 1985 will also be carried out.

The following table classifies motor vehicles on register by type of vehicle and year of manufacture at 30 September 1982.

**Motor Vehicles on Register: Type of Vehicle and Year of Manufacture, South Australia  
30 September 1982 <sup>(a)</sup>**

Year of Manu- facture	Type of Vehicle							Total (a)
	Motor Cars and Station Wagons	Utilities	Panel Vans	Rigid Trucks	Articu- lated Trucks	Other Truck Type Vehicles	Buses	
				'000				
Before 1965	31.1	3.4	0.9	6.5	0.1	0.7	0.2	42.9
1965-1967 ....	38.0	3.5	1.1	3.3	0.2	0.3	0.2	46.5
1968-1970 ....	72.0	5.5	2.0	4.7	0.4	0.6	0.4	85.7
1971 .....	30.1	1.9	1.0	1.5	0.2	0.3	0.3	35.1
1972 .....	30.1	2.4	1.1	1.6	0.2	0.3	0.2	35.8
1973 .....	37.0	2.7	1.5	2.1	0.2	0.4	0.2	44.1
1974 .....	42.3	3.3	1.9	2.1	0.3	0.5	0.2	50.5
1975 .....	43.9	2.9	2.4	2.3	0.3	0.6	0.2	52.4
1976 .....	45.5	3.3	2.8	2.7	0.4	0.5	0.3	55.6
1977 .....	37.6	2.6	2.6	2.6	0.3	0.4	0.4	46.6
1978 .....	36.3	2.4	2.2	2.5	0.4	0.3	0.3	44.4
1979 .....	37.6	2.3	1.7	2.4	0.4	0.2	0.3	44.8
1980 .....	35.3	2.5	1.9	2.8	0.4	0.2	0.2	43.3
1981 .....	35.1	2.9	2.5	2.6	0.4	0.2	0.2	43.9
1982 .....	28.7	2.0	2.5	1.8	0.2	0.2	0.1	35.5
Total .....	580.4	43.5	28.0	41.5	4.4	5.7	3.6	707.2

(a) Excludes motor cycles (36 818) and Commonwealth Government owned vehicles.



#### Road Safety

Some recent moves towards greater road safety were detailed on pages 514-5 of the *South Australian Year Book 1973*. These mainly related to the operations of the new Road Safety Instruction Centre and the points demerit scheme which came into operation on 29 April 1971.

Regulations under the Road Traffic Act require that any modification to a motor vehicle with a gross vehicle mass less than 4.5 tonnes (motor cycles excepted) must meet certain standards and that approval of the Road Traffic Board is necessary before certain types of modifications can be made.

All motor vehicles manufactured on or after 1 May 1971, must have affixed a compliance plate showing that the vehicle has been approved by the Australian Motor Vehicle Certification Board and complies with Australian Design Rules for Motor Vehicle Safety applicable to the year of manufacture. Road Traffic Board exemption from this requirement is limited to immigrants or local residents returning from overseas with a vehicle they wish to register privately in this State.

Following an amendment to the Road Traffic Act, a different interpretation of 'STOP'

signs became operative on 1 March 1975. Under this legislation, a driver facing a 'STOP' sign must give way to all traffic whether it is coming from the left or from the right. Previously, drivers had to give way only to the traffic from the right. The legislation conforms with the National Road Traffic Code.

In March 1980 the Road Traffic Act was amended to introduce the 'T' junction rule whereby motorists on the terminating leg of a 'T' junction are required to give way to vehicles on the other road. This requirement was also adopted in the legislation of the other States.

Random Breath Testing to determine blood alcohol levels of drivers was commenced in South Australia in October 1981, under legislation covering a three year term.

The Road Traffic Act now requires a seat belt to be worn by the driver and passenger of a motor vehicle where seat belts are fitted irrespective of the year of manufacture of the vehicle. As from 1 May 1984 the compulsory wearing of seat belts was extended to apply to all persons over seventy years of age who were exempt previously. An amendment to the Act, which came into operation on 1 March 1977, greatly strengthened the penalty provisions of the Act. The penalties are classified into (a) general penalty offences which include the majority of offences and carry a maximum penalty of \$1000 and (b) special penalty offences which deal with the more serious offences (e.g. a driver convicted on a drink-driving offence for the first time can face the following charges, (i) disqualification from holding a drivers licence for not less than six months and (ii) a fine of not less than \$400 and not more than \$700 or imprisonment for not more than three months).

### Road Traffic Accidents

Statistics of road traffic accidents are compiled from reports made to members of the South Australian Police Department by persons involved in such accidents. Section 43 of the Road Traffic Act sets out the obligations of the driver of a vehicle involved in an accident—he must stop his vehicle at once, render any assistance of which he is capable to anyone injured in the accident, state his name and address if requested to any person having reasonable grounds for such request, and report the accident to the Police as soon as possible, or at least within twenty-four hours of the accident. However, it is a defence against a charge relating to non-reporting of an accident if a defendant can prove either that he did not know that an accident occurred or that the only damage or injury resulting from the accident was to property and that a fair estimate of the damage did not exceed \$300.

For the purpose of these statistics, a road traffic accident is defined as an accident which occurs because of the presence of a moving vehicle on a road or other public thoroughfare (e.g. public car park, beach) and which involves property damage exceeding \$300 or casualty; a casualty occurring if the accident resulted in:

- (a) the death of any person within a period of thirty days of the accident; or
- (b) bodily injury to any person to an extent requiring surgical or medical treatment.

With the introduction of a more comprehensive accident report form on 1 October 1967, statistics have become available as a result of a joint effort by the South Australian Police Department, the Road Traffic Board of South Australia and the Australian Bureau of Statistics.

The following table shows summary details of road traffic accidents for the years 1979 to 1981. During 1981 the total number of recorded road traffic accidents decreased by 3.1 per cent (from 31 552 in 1980 to 30 574 in 1981). The number of accidents which resulted in casualties decreased fractionally (from 7 336 in 1980 to 7 317 in 1981).

## Road Traffic Accidents, South Australia

Year	Total Accidents Recorded	Accidents Involving Casualties	Persons Killed	Persons Injured	Rate per 100 000 Motor Vehicles on Register (a)			Rate per 100 000 of Mean Population		
					Total Accidents Recorded	Persons Killed	Persons Injured	Total Accidents Recorded	Persons Killed	Persons Injured
1979 .....	34 942	8 359	309	11 338	5 060	45	1 642	2 702	24	877
1980 .....	31 552	7 336	269	9 875	4 453	38	1 393	2 429	21	761
1981 .....	30 574	7 317	222	9 737	4 215	31	1 342	2 318	17	738

(a) 'Motor vehicles on register' is the number recorded at 30 June; includes Commonwealth Government owned vehicles except defence services vehicles; excludes tractors, trailers, plant, equipment and caravans.

Drivers (including motor cyclists) under twenty-one years of age, representing 14 per cent of licence holders at 30 June 1981, accounted for 19 per cent of drivers involved in accidents, 28 per cent of drivers killed and 21 per cent of drivers injured during 1981. For drivers aged twenty-one to twenty-nine years involvements were 21 per cent, deaths 37 per cent and injuries 22 per cent while their representation in the driving population was 24 per cent. Pedestrians sixty years and over accounted for 18 per cent of pedestrians involved, 19 per cent of pedestrians injured and 45 per cent of pedestrians killed.

The following table shows casualties by type of road user in each of the five years to 1981.

## Road Traffic Accidents: Casualties, South Australia

Year	Drivers of Motor Vehicles	Motor Cyclists	Pedal Cyclists	Pass-engers	Pedes-trians	All Other	Total
PERSONS KILLED							
1977 .....	108	42	9	96	51	—	306
1978 .....	119	33	6	81	52	—	291
1979 .....	117	43	9	91	49	—	309
1980 .....	100	41	9	76	43	—	269
1981 .....	85	22	12	61	42	—	222
PERSONS INJURED							
1977 .....	4 140	1 625	554	3 646	810	6	10 781
1978 .....	4 612	1 403	553	3 828	804	9	11 209
1979 .....	4 678	1 408	606	3 817	819	10	11 338
1980 .....	4 106	1 249	652	3 168	697	3	9 875
1981 .....	4 067	1 299	579	3 031	689	72	9 737

In the following table, the types of road users killed and injured are shown according to age groups for 1981.

## Road Traffic Accidents: Age Groups of Casualties, South Australia, 1981

Age Group of Casualty (Years)	Drivers of Motor Vehicles	Motor Cyclists	Pedal Cyclists	Pass-engers (a)	Pedes-trians	All Other	Total
PERSONS KILLED							
Under 5 .....	—	—	—	1	1	—	2
5-7 .....	—	—	2	1	2	—	5
8-15 .....	—	—	5	9	4	—	18



## Road Traffic Accidents: Age Groups of Casualties, South Australia, 1981 (continued)

Age Group of Casualty (Years)	Drivers of Motor Vehicles	Motor Cyclists	Pedal Cyclists	Passengers (a)	Pedestrians	All Other	Total
16-20 .....	25	5	—	20	6	—	56
21-24 .....	15	10	2	6	1	—	34
25-29 .....	11	4	1	1	2	—	19
30-39 .....	10	1	—	3	1	—	15
40-49 .....	5	2	1	9	1	—	18
50-59 .....	10	—	—	3	5	—	18
60 and over .....	8	—	1	8	19	—	36
Not stated .....	1	—	—	—	—	—	1
Total .....	85	22	12	61	42	—	222

PERSONS INJURED						
Under 5 .....	—	—	1	123	39	5
5-7 .....	—	—	31	98	50	1
8-15 .....	8	8	212	393	110	26
16-20 .....	946	523	96	721	95	14
21-24 .....	606	283	42	285	47	3
25-29 .....	505	191	35	163	41	2
30-39 .....	730	119	35	194	44	2
40-49 .....	421	35	24	126	39	1
50-59 .....	352	32	26	149	50	1
60 and over .....	277	10	33	197	118	2
Not stated .....	222	98	44	582	56	15
Total .....	4 067	1 299	579	3 031	689	72

(a) Passengers include pillion motor cyclists.

Details of road traffic accidents for 1981 according to time and day of occurrence are shown in the next table. More accidents occurred on Fridays (5 515 accidents) and Saturdays (4 800) than on other days of the week and more accidents occurred between 4 p.m. and 6 p.m. than during any other two-hour period. More accidents occurred between 4 p.m. and 6 p.m. on Fridays than on other days in that period and more deaths resulted from accidents occurring on Fridays (45) and Saturdays (53).

## Road Traffic Accidents: Day of Week and Time of Occurrence, South Australia, 1981

Time of Occurrence	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Total
TOTAL ACCIDENTS								
After: Until:								
Midnight 2 a.m. ....	56	57	95	118	159	405	464	1 354
2 a.m. 4 a.m. ....	22	22	20	39	48	135	196	482
4 a.m. 6 a.m. ....	25	17	25	34	27	60	72	260
6 a.m. 8 a.m. ....	303	302	320	322	306	108	58	1 719
8 a.m. 10 a.m. ....	476	514	514	520	560	318	141	3 043
10 a.m. 12 noon ....	443	408	441	458	566	723	324	3 363
12 noon 2 p.m. ....	434	391	443	490	565	574	427	3 324

**Road Traffic Accidents: Day of Week and Time of Occurrence, South Australia, 1981**  
(continued)

Time of Occurrence		Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Total
2 p.m.	4 p.m. ....	597	572	597	616	750	516	454	4 102
4 p.m.	6 p.m. ....	908	940	901	1 019	1 079	594	559	6 000
6 p.m.	8 p.m. ....	340	387	384	527	667	632	427	3 364
8 p.m.	10 p.m. ....	184	209	212	344	393	364	209	1 915
10 p.m.	Midnight ....	155	160	180	221	387	366	151	1 620
Unknown	.....	3	1	2	7	8	5	2	28
Total .....		3 946	3 980	4 134	4 715	5 515	4 800	3 484	30 574

**PERSONS KILLED**

After:	Until:								
Midnight	2 a.m. ....	2	4	1	4	6	7	5	29
2 a.m.	4 a.m. ....	—	—	—	—	1	5	2	8
4 a.m.	6 a.m. ....	1	—	2	1	—	—	—	4
6 a.m.	8 a.m. ....	—	1	1	1	2	1	2	8
8 a.m.	10 a.m. ....	3	4	2	2	2	4	1	18
10 a.m.	12 noon ....	3	2	2	2	4	2	1	16
12 noon	2 p.m. ....	3	1	1	3	5	2	1	16
2 p.m.	4 p.m. ....	3	2	2	3	5	4	4	23
4 p.m.	6 p.m. ....	6	2	5	3	3	9	2	30
6 p.m.	8 p.m. ....	1	3	3	2	5	7	7	28
8 p.m.	10 p.m. ....	1	2	4	1	10	8	2	28
10 p.m.	Midnight ....	2	—	—	5	2	4	1	14
Total .....		25	21	23	27	45	53	28	222

**PERSONS INJURED**

After:	Until:								
Midnight	2 a.m. ....	26	18	34	48	79	181	219	605
2 a.m.	4 a.m. ....	11	5	6	19	18	60	91	210
4 a.m.	6 a.m. ....	10	4	6	13	9	20	38	100
6 a.m.	8 a.m. ....	97	96	101	125	99	38	20	576
8 a.m.	10 a.m. ....	128	121	149	129	112	95	45	779
10 a.m.	12 noon ....	109	114	115	111	134	156	115	854
12 noon	2 p.m. ....	109	91	129	137	143	182	142	933
2 p.m.	4 p.m. ....	147	186	185	181	193	217	161	1 270
4 p.m.	6 p.m. ....	249	286	259	292	320	205	196	1 807
6 p.m.	8 p.m. ....	117	133	111	162	203	242	212	1 180
8 p.m.	10 p.m. ....	61	79	93	134	138	184	85	774
10 p.m.	Midnight ....	66	61	75	90	167	126	50	635
Unknown	.....	2	—	—	4	3	3	2	14
Total .....		1 132	1 194	1 263	1 445	1 618	1 709	1 376	9 737

Although more than two-thirds of all accidents occurred between 6 a.m. and 6 p.m. the reported severity of accidents, judged on the basis of death and injury rates, was considerably greater during the 'night hours', as can be seen from the following table.

**Accidents and Casualties: Time of Day, Fatality and Injury Rates**  
**South Australia, 1981**

Time of Occurrence		Accidents Occurring	Persons Killed	Persons Injured	Persons Killed Per 100 Accidents Occurring	Persons Injured Per 100 Accidents Occurring
After:	Until:					
Midnight	2 a.m. ....	1 354	29	605	2.1	44.7
2 a.m.	4 a.m. ....	482	8	210	1.7	43.6
4 a.m.	6 a.m. ....	260	4	100	1.5	38.5
6 a.m.	8 a.m. ....	1 719	8	576	0.5	33.5
8 a.m.	10 a.m. ....	3 043	18	779	0.6	25.6
10 a.m.	12 noon ....	3 363	16	854	0.5	25.4
12 noon	2 p.m. ....	3 324	16	933	0.5	28.1

**Accidents and Casualties: Time of Day, Fatality and Injury Rates  
South Australia, 1981 (continued)**

Time of Occurrence		Accidents Occurring	Persons Killed	Persons Injured	Persons Killed Per 100 Accidents Occurring	Persons Injured Per 100 Accidents Occurring
2 p.m.	4 p.m. ....	4 102	23	1 270	0·6	31·0
4 p.m.	6 p.m. ....	6 000	30	1 807	0·5	30·1
6 p.m.	8 p.m. ....	3 364	28	1 180	0·8	35·1
8 p.m.	10 p.m. ....	1 915	28	774	1·5	40·4
10 p.m.	Midnight ....	1 620	14	635	0·9	39·2
Unknown	.....	28	—	14	—	50·0
Total .....		30 574	222	9 737	0·7	31·9

The following table shows the nature of accidents which occurred in 1981. Collision between vehicles accounted for 72 per cent of all accidents and 47 per cent of deaths, while vehicles overturning or leaving the road and vehicles colliding with pedestrians accounted for about 5 per cent and 2 per cent of all accidents respectively. Vehicles overturning or leaving the road and vehicles colliding with pedestrians each accounted for 12 and 17 per cent of deaths respectively.

**Road Traffic Accidents: Nature, South Australia, 1981**

Nature of Accidents	Total Accidents Reported	Accidents Involving Casualties	Persons Killed	Persons Injured
Collisions between vehicles (a):				
Head on .....	960	308	41	563
Rear end .....	8 824	1 410	14	1 846
Right angles .....	7 607	1 885	35	2 651
Other .....	4 677	838	14	1 082
Vehicles:				
Overturning or leaving road (b) .....	1 690	835	27	1 146
Colliding with:				
Fixed object .....	3 134	982	48	1 327
Parked vehicle .....	2 417	193	4	238
Pedestrian .....	701	687	37	690
Other (c) .....	344	55	2	68
Other .....	220	124	—	126
Total .....	30 574	7 317	222	9 737

(a) Includes trains at railway level crossings, trams and vehicles stopped on carriageway.

(b) Includes collisions subsequent to vehicles leaving carriageway.

(c) Includes collisions with non-ridden animals, parked trailers, etc.

The following table shows the age group and sex of persons holding drivers licences and permits at 30 June 1981 and involvements in accidents during 1981 of drivers and riders within the same classifications. In this table figures for involvements relate to accidents occurring in South Australia whereas licence and permit holders are those licences, etc., issued in South Australia, and the licences on issue at 30 June are only an approximation of the average for the year.

It should be noted in particular that these figures do not measure exposure to risk: for example they take no account of distances driven, times of day into which driving may be concentrated or traffic conditions during those times.

The following additional limitations should be observed when interpreting the figures:

- (a) all figures include permit holders; the accident involvement of permit holders, who are permitted to drive a vehicle only when accompanied by a fully licensed driver, appears, from an examination of the relevant data, to be significantly lower than that of fully licensed drivers. At 1 July 1981, there were 14 640 permit holders; of these 5 917 or 40 per cent were aged 16 years and 11 143 or 76 per cent of the total were aged 20 years or less; thus, if permit holders and their involvements in accidents were excluded from the table, it could be expected that the involvement rates in the lower age groups would be higher than those shown;
- (b) the number of involvements with ages not stated is high; and their age distribution, if known, might be different from that of known cases.

**Road Traffic Accidents: Age and Sex of Licensed Drivers and of Drivers and Riders Involved in Accidents, South Australia, 1981 <sup>(a)</sup>**

Age (Years)	Licensed Drivers Riders and Permit Holders at 30 June 1981 (b)		Accident Involvement of Drivers and Riders (c)		Accident Involvement Rate per 100 Licensed Drivers and Riders	
	Males	Females	Males	Females	Males	Females
Under 21 .....	51 208	35 921	8 001	2 482	15.6	6.9
21-24 .....	46 887	37 378	4 693	2 033	10.0	5.4
25-29 .....	55 937	46 359	4 020	1 881	7.2	4.1
30-34 .....	54 387	44 704	3 297	1 695	6.1	3.8
35-39 .....	42 820	34 403	2 488	1 277	5.8	3.7
40-44 .....	35 883	26 668	2 067	957	5.8	3.6
45-49 .....	31 959	21 451	1 805	692	5.6	3.2
50-54 .....	34 691	21 513	1 957	667	5.6	3.1
55-59 .....	32 507	19 615	1 600	494	4.9	2.5
60-64 .....	25 042	14 262	1 073	358	4.3	2.5
65-69 .....	20 407	10 278	753	252	3.7	2.5
70-74 .....	11 793	4 904	477	128	4.0	2.6
75-79 .....	5 743	2 044	216	106	3.8	5.2
80 and over .....	2 488	741	137	39	5.5	5.3
Not stated .....	—	—	8 726	2 216	—	—
Total .....	451 752	320 241	41 310	15 277	9.1	4.8

(a) Includes both licensed riders and permit holders.

(b) Details provided by Motor Registration Division, Department of Transport.

(c) Drivers and riders involved in more than one accident during the year are included once for each accident.

## SHIPPING

### Control of Shipping

The Commonwealth Parliament is empowered under the Constitution to make laws in respect of trade and commerce with other countries and among the States.

Navigation and shipping are regulated under the *Navigation Act 1912* and the provisions of the Act apply to ships registered in Australia (except those engaged solely in the domestic trade of any one State) and other British ships whose first port of clearance and

whose port of destination are within Australia. Other shipping Acts under the trade and commerce power are the *Sea-Carriage of Goods Act 1924*, the *Seamen's Compensation Act 1911*, the *Seamen's War Pensions and Allowance Act 1940*, the *Australian Coastal Shipping Commission Act 1966*, the *Australian Coastal Shipping Agreement Act 1956* and the *Stevedoring Industry Act 1956*.

Shipping in South Australia is controlled by the *Navigation Act 1912* and, where this does not apply, by the *Harbors Act, 1936-1980* and the *Marine Act, 1936-1976*. Both of the State Acts are administered by the Department of Marine and Harbors.

### **Registration of Motor Boats**

The Boating Act, 1974-1980 gives power to the South Australian Minister of Marine to regulate boating and other activities within South Australian waters. The main provisions of the Act refer to the registration of motor boats and the licensing of motor boat operators.

Any boat that is propelled by an engine, whether or not that engine is the main means of propulsion, must be registered and have its registration number displayed on the hull. The registration number consists of two letters followed by two digits and the letter 'S' denoting South Australia. From 1 October 1984 the annual registration fee was increased to \$17. A registration must be renewed annually, but, for a boat that is less than 3.048 metres in length and powered with an engine that develops less than 5 horsepower, a renewal fee is not required. At 30 June 1983 there were 43 444 motor boats registered.

Only persons, sixteen years of age or older, may be issued with a motor boat operators licence which remains in force without renewal unless cancelled or suspended under the Act or voluntarily surrendered. A person aged between twelve and sixteen years may be issued a permit to operate a motor boat subject to certain restrictions. At 30 June 1983 there were 94 083 licensed operators of motor boats. The other main provisions of the Act deal with unseaworthy boats, wrecks and abandoned boats, speed restrictions, rules for water ski-ing, reckless and dangerous operation, and the reporting of accidents.

Details of the minimum safety equipment required to be carried in a motor boat are listed in the Act's Regulations; these vary according to the length of the motor boat and whether it operates in in-shore or off-shore waters.

### **Registration of Ships**

An Australian Register of Ships operative from 26 January 1982, was established in Canberra by the Commonwealth Government. It replaced the British Register of Ships, which, for a variety of reasons had become inappropriate as a means of registering Australian ships.

Four different measures of tonnage (gross, net, displacement or deadweight) may be applied to a vessel. Gross tonnage is the total enclosed cubic capacity of the ship on a basis of 2.83 cubic metres a tonne; net tonnage is the cubic capacity available for cargo in terms of 2.83 cubic metres a tonne; displacement tonnage is the weight of water displaced by a ship; deadweight tonnage is the total weight of fuel, water, stores and cargo that a ship will carry. Passenger ships are commonly rated by the gross tonnage, cargo ships by their net tonnage, warships by their displacement tonnage and oil tankers by their deadweight tonnage.

### **Shipping Search-and-Rescue**

The Australian Government is party to an international agreement requiring that all necessary arrangements are made for the rescue of people in distress at sea. The task of co-ordinating these arrangements lies with the Department of Transport's Federal Sea Safety and Surveillance Centre (FSS&SC) in Canberra.

The FSS&SC works closely with the Defence Forces and the State Police (who are the State search-and-rescue authorities). Search-and-rescue for pleasure craft, fishing boats or other vessels within a port or in near coastal waters is a police responsibility.

If a search-and-rescue operation extends beyond the resources of State authorities and additional help is needed, responsibility is assumed by the FSS&SC.

### Overseas Shipping

Overseas shipping cargo statistics are compiled from returns submitted by shipping companies, or their representatives, to Customs Houses at each port in South Australia. The statistics relate to overseas vessels calling at or departing from South Australian ports for the purpose of carrying cargo from or to overseas ports except for naval vessels, yachts and other craft used for pleasure, foreign fishing vessels that neither load nor discharge cargo, geophysical, oceanographic research and seismic survey vessels; offshore oil drilling rigs and related service vessels, Australian registered fishing vessels operating from Australian ports and all vessels of 200 registered net tonnes and under.

Cargo statistics are recorded in both revenue tonnes and in gross weight tonnes. A revenue tonne is the unit of quantity used predominantly in the shipping industry. It is the basis on which freight is charged and is obtained by adding mass (tonnes weight) and volume (cubic metres) units. Because revenue tonnes are derived by adding mass and volume units they should be used with care. Gross weight is the total weight of cargo, excluding the weight of containers, irrespective of the basis on which freight is charged.

The following tables show, for the year 1982-83, particulars of cargo loaded in South Australia for discharge overseas, and of cargo discharged in South Australia from overseas, classified according to major trade areas and overseas vessel calls and cargo discharged and loaded by South Australian ports.

**Shipping: Overseas Cargo Discharged and Loaded in South Australia  
by Trade Area, 1982-83**

Trade Area	Cargo Discharged		Cargo Loaded	
	Revenue Tonnes	Gross Weight Tonnes	Revenue Tonnes	Gross Weight Tonnes
European (a) .....	68 660	48 285	223 532	218 131
East Asian .....	19 835	13 948	568 132	568 070
Japanese (b) .....	456 055	243 858	371 720	366 507
North America:				
West Coast .....	126 468	107 042	86 173	85 618
East Coast .....	110 695	108 028	33 665	30 477
Central America and Caribbean .....	—	—	8 023	6 515
South America:				
West Coast .....	—	—	18 000	18 000
East Coast .....	—	—	43 714	43 714
West Africa .....	7 000	7 000	—	—
South and East Africa .....	6 372	4 315	47 745	43 247
Red Sea .....	—	—	363 406	360 557
Persian Gulf .....	1 224 539	1 224 539	414 036	412 964
India:				
West Coast .....	16 439	16 439	60 518	60 518
East Coast .....	77	77	53 239	53 229

**Shipping: Overseas Cargo Discharged and Loaded in South Australia  
by Trade Area, 1982-83 (continued)**

Trade Area	Cargo Discharged		Cargo Loaded	
	Revenue Tonnes	Gross Weight Tonnes	Revenue Tonnes	Gross Weight Tonnes
South-East Asia .....	541 656	525 102	440 827	420 463
New Zealand .....	—	—	—	—
Papua/New Guinea .....	—	—	14 127	5 648
Central Pacific .....	—	—	40 403	40 278
French Pacific .....	2	1	51	36
Pacific Islands .....	94 463	94 463	90	90
<b>Total cargo .....</b>	<b>2 672 261</b>	<b>2 393 097</b>	<b>2 787 401</b>	<b>2 734 064</b>

(a) Includes USSR (Western Ports).

(b) Includes USSR (Eastern Ports).

**Cargo Handled at Major Ports**

The South Australian Department of Marine and Harbors records details of cargo handled at the larger ports in this State and the following table shows details for each of the last five years.

**Cargo Handled: Major Ports, South Australia**

Port	1979-80	1980-81	1981-82	1982-83	1983-84
	'000 tonnes				
American River .....	34	36	35	—	—
Ardrossan .....	1 096	925	721	500	771
Ballast Head .....	168	207	184	148	150
Kingscote .....	102	112	107	129	142
Klein Point .....	781	705	675	837	421
Port Adelaide .....	4 081	3 836	3 701	3 157	3 315
Port Bonython .....	—	—	—	232	935
Port Giles .....	183	169	85	75	122
Port Lincoln .....	1 239	961	862	553	1 152
Port Pirie .....	1 496	1 362	1 281	1 074	1 234
Port Stanvac .....	3 521	3 325	3 126	2 837	3 081
Proper Bay .....	64	64	31	14	39
Rapid Bay .....	366	289	169	178	137
Thevenard .....	1 110	866	1 192	884	1 123
Wallaroo .....	512	289	441	219	413
Whyalla .....	3 429	3 663	2 820	1 681	2 333
<b>Total .....</b>	<b>18 182</b>	<b>16 810</b>	<b>15 428</b>	<b>12 519</b>	<b>15 369</b>

Total cargo handled at all ports in South Australia increased from 12 519 000 tonnes in 1982-83 to 15 369 000 tonnes in 1983-84, an increase of 2 850 000 tonnes (22·8 per cent). The 1982-83 trading year was one of the most difficult on record, due chiefly to the effects of the world recession, the nation's worst drought in memory and inflationary pressures.

The new port of Port Bonython recorded its first export from the Cooper Basin oil field in 1982-83. Exports from Port Bonython are expected to make a substantial contribution to the State economy on a continuing and regular basis.

**Shipping: Overseas Vessel Calls and Cargo Discharged/Loaded by South Australian Ports, 1982-83**

Port	Cargo Discharged			Cargo Loaded		
	Vessel Calls (a)	Revenue Tonnes '000	Gross Weight Tonnage '000	Vessel Calls (a)	Revenue Tonnes '000	Gross Weight Tonnage '000
Ardrossan .....	5	—	—	5	50	50
Port Adelaide .....	461	766	487	454	836	781
Port Giles .....	9	—	—	9	75	75
Port Lincoln .....	46	109	109	47	312	312
Port Pirie .....	81	11	11	84	620	620
Port Stanvac .....	46	1 593	1 593	45	188	188
Thevenard .....	38	—	—	38	444	444
Walleroo .....	20	61	61	21	156	156
Whyalla .....	27	146	146	26	348	348
Total .....	733	(b) 2 687	2 407	729	(b) 3 028	2 974

(a) Includes one arrival call and one departure call for each port visited in South Australia.

(b) Includes Container Cargo—Discharged 88 000 tonnes; Loaded 169 000 tonnes.

**Distances to Overseas Ports**

Distances in kilometres from Port Adelaide to principal overseas ports are shown in the following table. Distances by sea from Port Adelaide to the ports of other Australian capital cities are given on page 467.

**Distances from Port Adelaide to Principal Overseas Ports**

Port Adelaide to:	Kilometres	Port Adelaide to:	Kilometres
<i>Africa;</i>		London .....	(a) 21 705
Cape Town .....	10 377	(b) 19 839	
<i>Asia;</i>		Marseilles .....	(a) 21 144
Colombo .....	7 982	(b) 16 688	
Djakarta .....	5 643	(a) 21 663	
Hong Kong .....	8 856	(b) 15 940	
Singapore .....	6 510	<i>New Zealand;</i>	
Yokohama .....	9 780	Auckland .....	3 769
<i>Europe;</i>		Wellington .....	3 482
Liverpool .....	(a) 21 630		
	(b) 19 774		



**Distances from Port Adelaide to Principal Overseas Ports (continued)**

Port Adelaide to:	Kilometres	Port Adelaide to:	Kilometres
<i>North America;</i>		Vancouver .....	14 357
<i>East Coast,</i>			
Baltimore .....	(a) 23 135 (c) 19 059	<i>Central America;</i>	
Montreal .....	(a) 23 541 (c) 21 368	Panama .....	15 385
New York .....	(a) 22 961 (c) 19 200	<i>South America;</i>	
		<i>East Coast,</i>	
<i>West Coast,</i>		Buenos Aires .....	(d) 14 388
San Francisco .....	13 653	Rio de Janeiro .....	(d) 15 901
		<i>West Coast,</i>	
		Valparaiso .....	12 353

(a) Via Cape Town. (b) Via Suez Canal. (c) Via Panama Canal. (d) Via Cape Horn.

**CIVIL AVIATION****Control of Civil Aviation**

In Australia, civil aviation is subject to the Commonwealth *Air Navigation Act 1920* and to regulations made under the Act. The South Australian Air Navigation Act, 1937 provided for 'the application of Commonwealth Air Navigation Regulations to, and in relation to, air navigation within the State of South Australia'. The regulations under the Commonwealth Act were drawn up to give effect to the 1944 Chicago Convention on Civil Aviation. Regulations based on the resolutions of the Paris Convention in 1919 were no longer adequate in the years after the 1939-45 War because of the immense wartime development of aerial transport.

The present regulations, administered by the Department of Aviation, cover the registration of aircraft and the issue of certificates of airworthiness, the licensing of aircraft services, aircraft operating crews, aerodromes, flying training schools, and the rules of the air. The Department is responsible for the provision and operation of air traffic services and rescue and fire fighting services and has assumed responsibility for co-ordination of search and rescue operations. It is also responsible for the prevention of undesirable effects of air traffic on the environment and of unlawful interference with aircraft and aviation facilities.

Under the *Australian National Airlines Act 1945* the Australian National Airlines Commission was established and empowered to operate Commonwealth Government owned air services. The Commission operates under the name Trans-Australia Airlines.

The *Civil Aviation Agreement Act 1952* ratified an agreement between the Commonwealth Government and Australian National Airways Pty Ltd to ensure the efficient and economical operation of air services within Australia by eliminating wasteful competition between that company and Trans-Australia Airlines and to rationalise the services of both airlines. The *Civil Aviation Agreement Act 1957* was enacted to extend the privileges and obligations of the 1952 Act to the new proprietor of the major private airline after the purchase of Australian National Airways Pty Ltd by Ansett Transport Industries Ltd. The Commonwealth Parliament passed the Airlines Equipment Act in 1958 and this provided for further financial assistance to both airlines for the purchase of new aircraft and empowered the Commonwealth Government to limit the aircraft capacity being provided on competitive routes by these two operators. This Act was amended by the *Airlines Equipment Amendment Act 1981* which effectively de-regulated air-cargo operations, and also increased the aircraft capacity which may be approved for use on passenger air services not subject to the Airlines Agreement as approved by the *Airlines Agreement Act 1981*.

The *Airlines Agreement Act 1981* consolidated the arrangements and principles developed by the Government to maintain and secure the competitive airline system on Australian domestic routes. This Act repealed the *Civil Aviation Agreement Acts* of 1952 and 1957 and the *Airlines Agreement Acts* of 1961, 1972 and 1973.

For reference to international agreements on civil aviation and international organisations see *Year Book Australia*.

### Aircraft on Register

The total number of aircraft listed at 30 June 1984 on the Australian register was 6 801. The following table shows figures for registered aircraft based in the South Australia-Northern Territory Region, classified by type of operation.

Aircraft Based in South Australia-Northern Territory Region, Type of Operation					
Type of Operation	At 30 June				
	1980	1981	1982	1983	1984
Regular public transport (a) .....	7	5	3	—	—
Private .....	481	484	489	475	484
Charter .....	168	171	210	224	206
Other (b) .....	142	135	151	143	122
Total .....	798	795	853	842	812

(a) Excludes major airlines servicing interstate routes.

(b) Includes agricultural work, ambulance, survey and pilot training functions.

### General Air Services

International air services commenced through Adelaide on 2 November 1982. Qantas provides direct services to London *via* Singapore and Bahrain, and to Auckland, New Zealand. British Airways provides direct services to London *via* Singapore and Muscat, and Singapore Airlines flies from Singapore *via* Adelaide to Melbourne and return.

Domestic scheduled flights operating through Adelaide provide regular links with Sydney, Melbourne, Perth, Brisbane, Alice Springs, Darwin and Canberra.

Adelaide is also the terminus for intrastate services. Regular connections are made to various centres in the State by Ansett Airlines of South Australia and other approved commuter operators.

Since 1966-67, when the Commonwealth Government approved introduction of commuter services in country areas, there has been a significant increase in regular air services between country towns and areas which are either not served by the major airlines or had no direct air service with Adelaide or the nearest major provincial city. Such services usually utilise single or twin engined aircraft and operate to fixed and published time-tables.

The first commuter service in Australia, between Adelaide and the opal fields at Andamooka and Coober Pedy, commenced during 1966-67.

### Civil Aviation Accidents

There were no civil aviation accidents involving regular public transport in South Australia during 1984 or during the ten year period 1975 to 1984. Accidents by other class of operation are shown in the table below.

Civil Aviation Accidents Involving Casualties, South Australia, 1984 <sup>(a)</sup>

Class of Operation	No. of Accidents	Persons Killed	Persons Injured
Aerial Works not involving public transport .....	2	1	1
Private .....	2	2	2
<b>Total .....</b>	<b>4</b>	<b>3</b>	<b>3</b>

(a) Excludes parachutists killed or injured on contact with earth.

Civil Aviation Accidents Involving Casualties, South Australia, 1975 to 1984 <sup>(a)</sup>

Class of Operation	No. of Accidents	Persons Killed	Persons Injured
Charter .....	1	1	3
Aerial Agriculture .....	1	—	1
Training .....	1	1	2
Other aerial work .....	3	2	1
Private .....	12	28	5
Gliding .....	8	4	6
<b>Total .....</b>	<b>26</b>	<b>36</b>	<b>18</b>

(a) Excludes parachutists killed or injured on contact with earth.

## Passengers and Freight Carried

The number of passengers and the tonnage of freight carried on civil airlines and commuter services in South Australia are shown in the following tables.

## Commuter Passenger, Freight and Aircraft Movements, South Australia, 1983-84

Airport	Passengers	Freight (Tonnes)	Aircraft Movements
Adelaide (a) .....	95 208	171	21 564
American River .....	4 291	4	3 820
Ceduna .....	1 921	4	462
Coober Pedy .....	3 111	26	859
Cummins .....	4 477	—	1 462
Kingscote .....	24 175	5	8 048
Kingston .....	104	2	1 252
Leigh Creek .....	2 378	13	780
Millicent .....	434	2	1 982
Mount Gambier .....	20 122	22	5 149
Naracoorte .....	681	2	2 372
Olympic Dam .....	629	6	745
Parndana .....	5 044	6	1 910
Penneshaw .....	2 465	—	2 220
Port Augusta .....	823	15	926
Port Lincoln .....	18 862	27	4 001
Port Pirie .....	46	10	266
Renmark (a) .....	833	22	1 358

**Commuter Passenger, Freight and Aircraft Movements, South Australia, 1983-84**  
(continued)

Airport	Passengers	Freight (Tonnes)	Aircraft Movements
Streaky Bay .....	74	3	264
Tumby Bay .....	2 791	—	2 924
Whyalla .....	9 747	12	2 844
Woomera .....	1 220	4	950

(a) Figures contain estimates.

**Principal Airports, South Australia**  
**Passengers, Freight and Aircraft Movements**

Airport	1979-80	1980-81	1981-82	1982-83	1983-84
<b>PASSENGERS (a)</b>					
Adelaide (b) (c) .....	1 931 395	1 930 219	1 852 906	1 635 663	1 688 557
Adelaide International .....	—	—	—	—	88 524
Ceduna .....	—	—	—	3 364	3 217
Kingscote .....	62 906	52 642	50 778	48 517	42 687
Mount Gambier .....	39 428	37 786	35 665	21 298	25 332
Port Lincoln .....	65 040	59 124	59 824	55 515	64 146
Whyalla .....	44 514	46 556	41 677	41 368	45 256
<b>FREIGHT—TONNES (d)</b>					
Adelaide (b) (c) .....	21 206	19 157	17 267	14 268	15 894
Adelaide International .....	—	—	—	—	2 576
Ceduna .....	—	—	—	6	3
Kingscote .....	139	104	94	73	53
Mount Gambier .....	68	51	65	40	41
Port Lincoln .....	168	118	138	115	117
Whyalla .....	76	74	64	54	47
<b>AIRCRAFT MOVEMENTS (e)</b>					
Adelaide (c) .....	25 889	24 853	23 822	23 637	22 424
Adelaide International .....	—	—	—	—	747
Ceduna .....	—	—	—	198	183
Kingscote .....	2 089	1 814	1 721	1 629	1 450
Mount Gambier .....	1 858	1 813	1 738	807	1 267
Port Lincoln .....	2 336	2 154	2 182	2 098	2 163
Whyalla .....	1 518	1 480	1 496	1 448	1 455

(a) Total of embarkations and disembarkations.

(b) Figures of passengers and freight movements are overstated to the extent of through traffic transferring between flights.

(c) Includes Edinburgh Airfield.

(d) Total of freight loaded and unloaded.

(e) Total of arrivals and departures.

## 10.5 COMMUNICATION

As a result of Federation all the former colonial post and telegraph services were taken over by the Commonwealth Government on 1 March 1901 and until 1 July 1975 were controlled, pursuant to the provisions of the *Post and Telegraph Act 1901*, by the Postmaster-General through the Postmaster-General's Department. A detailed history of

Posts, Telegraphs and Telephones was included on pages 469-70 of the *South Australian Year Book 1967*.

In February 1973 a Commission was established to conduct an inquiry into what changes, if any, should be made in the organisation, administration and operations of postal and telecommunication services. In their report, presented in April 1974, the Commissioners recommended establishment of separate postal and telecommunication corporations independent of the jurisdiction of the Public Service Board.

As a result of the Government's acceptance of this recommendation the Australian Telecommunications Commission and the Australian Postal Commission took over from the Australian Post Office on 1 July 1975 under the provisions of the *Telecommunications Act 1975*, the *Postal Services Act 1975*, and the *Postal and Telecommunications Commissions (Transitional Provisions) Act 1975*.

### POSTAL SERVICES

The Australian Postal Commission was established by and operates under the *Postal Services Act 1975*, and provides the national postal service. It assumed this activity from the Postmaster-General's Department from 1 July 1975.

Australia Post services include surface and air mail services, both within Australia and to and from other countries, for the carriage of letters, cards, aerogrammes, newspapers, packages and parcels. Special services include express and priority paid mail, messenger delivery, cash on delivery, security mail services, response services, private boxes and locked bags. Several reduced rate services are provided including bulk direct mail advertising, bulk local delivery mail, bulk pre-sorted mail, unaddressed household delivery articles, and registered publications. A money transfer service (postal money orders) is operated and sales are also undertaken of postal products such as padded postal bags, postal stationery and philatelic items.

In late December 1983 Australia Post was authorised to operate courier and electronic mail services and provide agency services for private principals. It also acts as an agent for many services of Commonwealth, State and Local Government departments and authorities.

Details of post offices for the years 1980 to 1984 are given in the following table.

**Post Offices: South Australia and Northern Territory**  
**Number at 30 June**

Particulars	1980	1981	1982	1983	1984
Post Offices:					
Official .....	164	162	157	151	148
Non-official .....	506	483	463	446	442
Total .....	670	645	620	597	590

Non-official post offices are conducted by persons who are not employed under the *Postal Services Act 1975* and who receive an allowance based on business transacted. In many instances this type of business is conducted in conjunction with some other business activity.

At 30 June 1984, there were 3 871 persons employed in postal services in South Australia and Northern Territory comprising 3 024 official staff employed under the *Postal Services Act 1975*, 602 non-official staff and 245 mail contractors who held mail service contracts with Australia Post.

The Australia Post financial statements are prepared on an accrual accounting basis and in accordance with accounting principles generally applied in commercial practice.

Gross postage receipts collected in South Australia and Northern Territory by Australia Post during 1983-84 totalled \$77.2 million comprising \$38.9 million from postage stamps, \$21.9 million from postal debtors, \$9.4 million from franking machines and \$7.0 million from stamp printing machines (including cash register receipts) and Cash Bulk Postage.

### Postal Articles Handled

Details of articles handled by post offices in South Australia and the Northern Territory during the years 1980-81 to 1983-84 are shown in the following table.

#### Postal Articles Handled, South Australia and Northern Territory

Year	Standard Articles (a)	Non-standard Articles (a)	Parcels (a)(b)	Registered Articles	All Articles
'000					
Posted for delivery:					
Within Australia;					
1980-81 .....	183 483	22 101	2 126	321	208 031
1981-82 .....	191 183	23 354	2 238	306	217 081
1982-83 .....	191 358	23 471	2 157	294	217 280
1983-84 .....	196 103	23 588	2 182	295	222 168
Beyond Australia;					
1980-81 .....	7 386	695	85	71	8 237
1981-82 .....	6 796	723	89	69	7 677
1982-83 .....	8 301	843	87	64	9 295
1983-84 .....	8 494	782	89	65	9 430
Received from beyond Australia:					
1980-81 .....	5 135	1 170	84	22	6 411
1981-82 .....	4 679	1 141	78	22	5 920
1982-83 .....	5 171	956	82	19	6 228
1983-84 .....	4 721	1 075	82	19	5 897

(a) Includes Certified and Messenger Delivery and Priority Paid mail.

(b) Includes registered parcels.

### Postal Money Orders

In November 1977 a new money transfer service called Postal Money Orders was introduced. This service replaced the Money Order and Postal Order services previously operated by Australia Post.

Details of Postal Money Orders for the years 1980-81 to 1983-84 are included in the following table.

#### Postal Money Orders Issued and Paid South Australia and Northern Territory

Year	Issued		Paid	
	Number	Value	Number	Value
	'000	'000	'000	'000
1980-81 .....	1 160	57 465	917	49 345
1981-82 .....	982	59 927	876	54 399
1982-83 .....	1 043	59 894	836	54 478
1983-84 .....	1 094	65 804	860	58 349

## TELECOMMUNICATION SERVICES

Established by the *Telecommunications Act 1975*, the Australian Telecommunications Commission (Telecom Australia) is given the responsibility for the provision, maintenance and operation of telecommunications services and is required to perform its functions in such a manner as will best meet the social, industrial and commercial needs of Australian people. It is required to make its services available throughout Australia so far as is reasonably practicable. Revenue must cover current expenses each year and provide not less than half of capital requirements. Services are to be kept up to date and operated efficiently and economically with charges as low as practicable.

Telecom Australia has responsibility for telecommunications services within Australia, and provides:

- networks and products for telephone, text and data;
- leased private lines;
- public telegram service;
- coin telephones;
- PABX and small business systems;
- ITERRA satellite service;
- mobile telephone services;
- tefinder (radio paging);
- dial-it (recorded information);
- 008 (inwards wide area calling);
- viatel (videotex);
- relay facilities for broadcasting and television; and
- directories.

Telecom Australia also operates equipment for the national broadcasting and television services and Radio Australia, as an agent of the Department of Communications.

At 30 June 1984 Telecom Australia in South Australia and the Northern Territory employed 8 670 staff.

In 1983-84 Telecom installed 44 355 new telephone services.

The following table shows telecommunication services in South Australia and the Northern Territory for the period 1979-80 to 1983-84.

Telecommunication Services and Calls Made, South Australia and Northern Territory

Services	1979-80	1980-81	1981-82	1982-83	1983-84
Telephone exchanges .....	628	626	612	604	587
Telephone services in operation .....	449 724	480 873	507 234	532 107	558 380
Telex services in operation .....	3 224	3 628	3 964	4 095	4 317
Data modems in operation .....	2 556	3 223	4 076	5 390	6 581
Telefunder services in operation .....	4 260	5 361	6 621	7 432	8 273
Calls Made (millions)					
Local telephone .....	420	383	421	535	551
Manual trunk .....	6·918	6·009	5·247	4·494	3·990
Subscriber trunk dialling .....	41·698	50·999	58·669	64·032	74·002
Manual international .....	0·334	0·357	0·349	0·321	0·317
International direct dialled .....	0·280	0·379	0·475	0·661	0·845
Total originating telegrams .....	0·738	0·695	0·615	0·527	0·490

**Telecommunication Services and Calls Made, South Australia and Northern Territory**  
(continued)

Calls Made (millions)	1979-80	1980-81	1981-82	1982-83	1983-84
Total terminating telegrams .....	0·680	0·589	0·497	0·425	0·393
Telex calls within Australia .....	5·216	5·759	5·558	4·864	4·888
International telex .....	0·330	0·348	0·438	0·474	0·512

**RADIO AND TELEVISION SERVICES**

**Broadcasting**

The call sign, location and date service commenced of all radio and television stations operating in South Australia are shown in the following tables. Other aspects of radio and television services, including the composition of television programs, are included in Part 6.4 Culture and Recreation.

**Radio Stations, 1 January 1984, South Australia**

Call Sign	Location	Date Service Commenced	Call Sign	Location	Date Service Commenced
<b>National Stations</b>			<b>Commercial Stations</b>		
Medium Frequency (AM)			Medium Frequency (AM)		
5AN	Adelaide	15-10-1937	5AA	Adelaide	14-3-1976
5CL	Adelaide	20-11-1924	5AD	Adelaide	2-8-1930
5CK	Crystal Brook	15-3-1932	5DN	Adelaide	24-2-1925
5LC	Leigh Creek (South)	30-6-1971	5KA	Adelaide	25-3-1927
5LN	Port Lincoln	14-11-1950	5AU	Port Augusta	25-5-1938
5MG	Mount Gambier	26-9-1955	5MU	Murray Bridge	16-9-1934
5MV	Berri	31-7-1975	5PI	Crystal Brook	17-1-1932
5PA	Naracoorte	14-12-1956	5RM	Berri	30-9-1935
5SY	Streaky Bay	31-5-1972	5SE	Mount Gambier	3-7-1937
5WM	Woomera	18-9-1953			
<b>National Station</b>			<b>Commercial Station</b>		
Frequency Modulation (FM)			Frequency Modulation (FM)		
ABC-FM	Adelaide	24-1-1976	5SSA-FM	Adelaide	12-9-1980
<b>Public Radio Station</b>					
Medium Frequency (AM)					
5UV	Adelaide	3-3-1975			
<b>Public Radio Stations</b>					
Frequency Modulation (FM)					
5EBI-FM	Adelaide	5-1-1980			
5MMM-FM	Adelaide	22-12-1979			
5PBA-FM	Salisbury	28-1-1983			
5GTR-FM	Mount Gambier	1-7-1983			
5RRR-FM	Woomera	12-1-1985			



## National Television Stations, 1 January 1984, South Australia

Call Sign and Channel	Location	Date Service Commenced	
ABS-2	Adelaide	March 1960	
ABS-2/44	Adelaide foothills—UHF translator	April 1980	
ABS-2	Bordertown—VHF translator	March 1970	
ABS-2/4	Keith—VHF translator	July 1969	
ABCS-7	Ceduna	July 1973	
ABGS-1	Mount Gambier	September 1965	
ABNS-1	Port Pirie	April 1965	
ABNS-1/45	Hawker-UHF translator	June 1983	
ABNS-1/44	Quorn-UHF translator	June 1983	
ABNS-1/6	Cowell—VHF translator	March 1970	
ABNS-1/6/3	Port Lincoln—VHF translator	May 1970	
ABRS-3	Loxton	January 1971	
ABWS-7	Woomera	November 1973	
ABLCS-9	Leigh Creek South—sate'lite	August 1980	
ABLCS-9/7	Leigh Creek South—VHF translator	October 1982	
ABQ-2/8	Andamooka	} Satellite feed from Brisbane studios	December 1980
ABQ-2/8	Cooper Pedy		November 1980
ABQ-2/8	Marree		November 1980
ABN-2/10	Streaky Bay		December 1982
ABS-2/8	Wirrulla		December 1982
ABS-2/9	Ceduna/Smoky Bay		July 1973

## Commercial Television Stations, 1 January 1984, South Australia

Call Sign and Channel	Location	Date Service Commenced
ADS-7	Adelaide	October 1959
ADS-7/46	Adelaide foothills—UHF translator	April 1980
NWS-9	Adelaide	September 1959
NWS-9/49	Adelaide foothills—UHF translator	April 1980
SAS-10	Adelaide	July 1965
SAS-10/52	Adelaide foothills—UHF translator	April 1980
GTS-4	Port Pirie	March 1968
GTS-4/8	Cowell—VHF translator	March 1970
GTS-4/8/5	Port Lincoln—VHF translator	May 1970
RTS-5A	Renmark/Loxton	November 1976
SES-8	Mount Gambier	March 1966

## OVERSEAS TELECOMMUNICATIONS SERVICES

The Overseas Telecommunications Commission (Australia) (OTC), established by the *Overseas Telecommunications Act 1946*, is a Commonwealth statutory authority responsible for the establishment, maintenance, operation and development of public telecommunications services between Australia and other countries, between Australia and its external territories and with ships at sea.

Communications into and out of Australia are transmitted by way of a complementary system of undersea coaxial cables, communications satellites and high-frequency radio.

In co-operation with Telecom Australia and communications carriers in other countries, OTC provides International Subscriber Dialling (ISD). Other international telephone, telegram, facsimile, photo-telegram, telex, leased circuit, audio broadcast and data transmission services are available to countries throughout the world by means of submarine cables, communication satellites and, in a decreasing number of cases, short-wave radio. Television relay is provided to and from countries with access to satellite communications facilities.

OTC operates fourteen coast radio stations for communication with ships at sea in Australian waters, and to provide high-frequency radio services with ships in any part of the world. It also has seven satellite earth stations in Australia. Those at Carnarvon in Western Australia and Moree in New South Wales operate through the INTELSAT Pacific Ocean satellites to Pacific region countries. The two earth stations at Ceduna in South Australia operate through INTELSAT's Indian Ocean satellites to Asia, Europe and Africa. OTC's newest satellite earth station at Healesville, Victoria, provides enhanced communication facilities for the Victorian public and business communities; it operates via INTELSTAT'S Pacific Ocean satellite. OTC also operates three submarine cable stations at Cairns (Queensland), Norfolk Island and Guam in the Pacific Ocean.

## **PART 11**

# **PUBLIC FINANCE**

## **11.1 STRUCTURE OF PUBLIC FINANCE**

The collection of public revenue and the expenditure of public money in South Australia are the responsibility of three groups of authorities: (i) Commonwealth Government; (ii) South Australian Government and State public corporations which together make up State Authorities; and (iii) local government.

The power to raise revenue from taxation is vested in the various governments and authorities by Acts of Parliament. Other revenue comes from the proceeds of the sale of goods and services to the public and to other governments and authorities. A major proportion of the revenue of the State Government, and a smaller proportion of the revenue of local government authorities and some public corporations is derived from grants from other levels of government. A further source of funds is the loan market; government securities are issued for loan raisings in Australia and overseas.

Authorisation for expenditure by Commonwealth and State Government departments is given by Appropriation Acts or by Special Acts of their respective Parliaments. Each State public corporation derives its authority for expenditure from the provisions of the specific Act under which it has been established. The Local Government Act, 1934-1985 contains sections relating to local government expenditure. The following sections of this Part provide details of the financial transactions of the public sector in South Australia; composite data being shown for State authorities with details for local government and Commonwealth Government financial transactions.

### Commonwealth Government Transactions

Reference is made to the revenue and expenditure of the Commonwealth Government only to the extent that it affects the finances of the State Government. As indicated in more detail below, not all of the transactions listed relate directly to the State Budget; many of the items are negotiated wholly through State Trust Funds. The transactions which are included represent only a small proportion of total expenditure by the Commonwealth Government within South Australia. A more detailed analysis of Commonwealth Government finance may be obtained from the *Year Book Australia*.

### State Government Transactions

Statistics relating to the financial transactions of State Government Departments, Committees, Boards and Commissions are derived mainly from an analysis and classification of the transactions which are published in the Treasurer's public accounts *i.e.* the Consolidated Account, Trust Fund Accounts and Deposit and Suspense Accounts.

State Government accounts are prepared on a cash basis, revenue not being brought to account until received nor expenditure until the actual disbursement is made.

#### *Consolidated Account*

Following an amendment to the Public Finance Act, 1936-1982 the former Consolidated Revenue Account and Loan Account were amalgamated to form a single account known as the Consolidated Account. The amendment took effect from July 1981.

The recurrent section of the account is credited with receipts from many items of State taxation, fees, licences and charges for services, recoveries of interest and sinking fund, personal income tax sharing arrangements (originally entitled financial assistance grants) and some other Commonwealth grants. This section is debited with the cost of revenue collection, legislative and administrative functions, interest and sinking fund on the public debt, provision of education, health, social security and welfare and other services, operation of business undertakings and development of State resources.

The capital section of the account records the capitalised payments for construction or acquisition of assets such as schools, reservoirs, hospitals, forests, plant and stores; advances to public authorities; and for primary production and housing. During recent years some capital grants (*e.g.* for housing) have also been made from loan funds.

State borrowing programs are subject to consideration and agreement at meetings of the Australian Loan Council. Funds are raised by the sale of Commonwealth securities on behalf of the State pursuant to the Financial Agreement which also provides for the redemption of such securities over specified periods from sinking funds contributed by the State and Commonwealth Governments to the National Debt Commission.

#### *Trust Funds Accounts*

These are principally moneys lodged with the Treasurer by public authorities and other bodies on current account; funds held for specific purposes pursuant to legislation, not necessarily expendable in any one year; contractors' and statutory deposits and unclaimed moneys. Section 35 of the Public Finance Act also authorises the State Treasurer to credit specific purpose Commonwealth grants to a suitable trust fund. At 30 June 1984 trust funds accounts showed a credit balance of \$103 194 000, representing approximately 3 per cent of the indebtedness of the South Australian Government.

#### *Deposit and Suspense Accounts*

Although the main function of many of them is to facilitate the allocation of charges and recoups to various headings of receipts and payments within the State Budget, some contain substantial transactions which are not reflected in the Budget *e.g.* the Woods and

Forests Working Account which includes most of the transactions of forest operations in South Australia and the Highways Fund through which a major proportion of the State's roads expenditure is transacted. Deposit and Suspense Accounts showed a credit balance of \$89 863 000 at 30 June 1984.

### Public Corporations

A public corporation is defined as a body (other than a local government authority) created by or under legislation to carry out an activity or activities on behalf of a government, or a body in which a government has a controlling interest.

Activities carried out by public corporations include tertiary education, hospital services, power supply, public transport, banking services, fire control, irrigation and drainage in rural areas, control and regulation of milk supply, slaughtering of animals for human consumption, housing development, off-course totalisators and lotteries, and investigation of problems relating to the development of mineral resources.

The transactions of public corporations have been combined with State Government to provide a composite analysis of receipts and outlays of all State Authorities in South Australia.

### Local Government Accounts

The information on local government authorities is prepared in a format similar to that used for the other public authorities. The original data are supplied by local councils in annual statements prepared in accordance with the 'Local Government Accounting Regulations, 1979' and subsequently are reclassified in a system which tabulates information on a uniform basis for all local authorities in Australia.

### Consolidated State and Local Government Accounts

An analysis of financial transactions of the Government sector would be incomplete without a comprehensive consolidation of all levels and funds of Government.

The tables which follow show figures on a consolidated net basis for State and local government authorities in South Australia for the four years to 1982-83. Net figures are those for which expenditures within a given classification have been reduced to the extent of any relevant receipt (and *vice versa*); and consolidated figures are those for which inter-authority, inter-level and inter-fund transactions are eliminated on consolidation of those authorities, levels and funds.

#### State and Local Government Authorities, South Australia Receipts and Financing Transactions

Particulars	1979-80	1980-81	1981-82	1982-83
	\$ million			
Revenue and grants received:				
Taxes, fees and fines .....	551.6	589.7	665.7	738.0
Net operating surpluses of trading enterprises;				
Operating revenue .....	691.8	757.8	872.5	1 098.4
Operating expenditure .....	580.9	634.5	713.1	906.8
Property income;				
Income from public financial enterprises .....	4.2	4.7	7.3	8.1
Interest received .....	75.9	93.3	109.6	120.6
Other property income .....	11.1	12.6	14.6	16.2
Other revenue .....	12.6	16.3	13.8	25.8

**State and Local Government Authorities, South Australia**  
**Receipts and Financing Transactions (continued)**

Particulars	1979-80	1980-81	1981-82	1982-83
\$ million				
Grants received from the Commonwealth;				
For current purposes .....	956.4	1 063.3	1 161.0	1 369.1
For capital purposes .....	157.5	163.9	169.6	226.0
Total revenue and grants received .....	1 880.2	2 067.2	2 301.1	2 695.4
Financing transactions:				
Advances from the Commonwealth (net) .....	108.9	110.4	76.4	129.2
Net borrowing:				
State public trading enterprises	65.5	63.4	114.4	225.7
State general government .....	17.0	5.4	6.2	14.1
Local authorities .....	16.8	15.5	10.8	8.4
Deposits received (net) .....	-2.9	1.2	-1.6	3.2
Decrease in investments .....	-0.4	5.5	-6.6	-8.8
Decrease in currency and deposits .....	-70.8	42.1	36.1	36.5
Increase in provisions .....	55.5	49.4	47.2	60.3
Other funds available .....	6.8	-0.3	24.3	-28.4
Total financing items .....	196.3	292.7	307.2	440.1
<b>Total funds available .....</b>	<b>2 076.2</b>	<b>2 360.0</b>	<b>2 608.3</b>	<b>3 135.5</b>

**State and Local Government Authorities**  
**South Australia, Outlay**

Particulars	1979-80	1980-81	1981-82	1982-83
\$ million				
Current outlay:				
Final consumption expenditure .....	1 172.2	1 358.2	1 495.1	1 716.1
Required current transfer payments;				
Interest payments to Commonwealth on advances .....	177.2	199.9	213.4	237.0
Other .....	70.4	83.3	98.4	136.3
Unrequired current transfer payments;				
Subsidies paid .....	59.0	57.0	68.9	86.2
Personal benefit payments .....	23.2	19.5	21.2	40.6
Grants to non-profit institutions	55.8	69.2	79.7	98.2
Other .....	—	—	0.3	—
Total current outlay .....	1 557.7	1 787.1	1 977.2	2 314.3

State and Local Government Authorities  
South Australia, Outlay (*continued*)

Particulars	1979-80	1980-81	1981-82	1982-83
\$ million				
Capital outlay:				
Gross fixed capital expenditure .....	492.7	521.1	600.1	740.4
Increase in stocks .....	4.9	8.8	6.4	14.2
Expenditure on land and intangible assets .....	7.1	5.6	-3.1	-5.2
Capital transfer payments;				
Grants to private sector and public financial enterprises ..	6.7	8.0	12.7	22.2
Advances paid (net);				
To public financial enterprises	24.4	29.2	32.2	18.2
To the private sector .....	-17.3	0.1	-17.1	31.3
<b>Total outlay .....</b>	<b>2 076.2</b>	<b>2 360.0</b>	<b>2 608.3</b>	<b>3 135.3</b>

## Further References

Additional information may be found in the following publications:

- 5501.4 *State Authorities Finance—South Australia*  
 5502.4 *Local Government Finance—South Australia*  
 5504.0 *State and Local Government Finance—Australia*

## 11.2 COMMONWEALTH-STATE GOVERNMENTS FINANCIAL RELATIONS

The Commonwealth of Australia Constitution Act and the 1927 Financial Agreement represent significant events in Commonwealth-State financial relations. Under the former, the States surrendered the right to levy customs and excise duties which passed exclusively to the Commonwealth and under the latter, the Commonwealth became the borrowing agent for the States.

Since Federation the Commonwealth has made payments of various descriptions to the States. Before the 1939-45 War, Commonwealth payments were confined, for the most part, to special grants to assist the financially weaker States and to certain specific purpose grants relating to such matters as Commonwealth assistance for roads and contributions under the Financial Agreement. Since the 1939-45 War there has been a marked increase in the amount and variety of Commonwealth assistance to the States. This has reflected, among other things, increases in the range and variety of government activities which have accompanied economic and social developments in this period of rapid growth of the Australian economy; greater participation by the Commonwealth in matters which were previously considered to be the sole responsibility of the States; and the effects of the introduction of uniform tax and of other changes on the allocation of financial resources between the Commonwealth and the States.

There are various ways of classifying Commonwealth payments to the States. They may be classified as 'capital' as opposed to 'current' transactions; to general purpose grants compared with payments for purposes specified by the Commonwealth; or in accordance with the constitutional authority under which the payments are made. Many of the recently introduced grants have been for specified purposes and instituted under Section 96 of the Commonwealth Constitution.

### SPECIAL GRANTS

The Constitution provides, in Section 96, for the granting of special financial assistance to the States. Before 1933 financial assistance of varying amounts was granted to South Australia, Western Australia and Tasmania.

In 1933 the Commonwealth appointed the Grants Commission, of three members, to inquire into and report upon claims made by any State for a grant of financial assistance and any matters relevant thereto. From 1933 to 30 June 1959 applications were lodged by each of the three States already mentioned.

Since 1949 each recommendation by the Commission for payment of a special grant has normally consisted of two parts. One part is based on an estimate of the claimant State's financial need in the current financial year, and is treated as an advance payment subject to adjustment two years later when the Commission has compared in detail the financial positions of the claimant and standard States in that year. The other part represents the final adjustment to the advance payment made two years earlier and is known as the completion payment.

In arriving at its recommendations, the Commission makes a detailed comparison between the financial position of a claimant State and those of the 'standard' States. Before 1959-60 the Commission used a standard derived from the experience of New South Wales, Victoria and Queensland. Since 1959-60 the 'standard' States have been New South Wales and Victoria.

Queensland has been the only applicant State in the period 1976-77 to 1980-81. South Australia withdrew from the special grants system in 1975 as part of the agreement to transfer its non-metropolitan railway network to the Commonwealth.

Under the provisions of the agreement reached at the June 1982 Premier's Conference for the phasing-in of new tax sharing relativities commencing from 1982-83, there are to be no special grants payable to any State in relation to the years 1982-83 to 1984-85.

### PERSONAL INCOME TAX SHARING ENTITLEMENT

Financial assistance grants, formerly called tax reimbursement grants, made up the bulk of the assistance provided for general revenue purposes before 1976-77 and were determined annually on the basis of an agreed formula. From 1976-77 the financial assistance grants were replaced by personal income tax sharing arrangements.

The income tax sharing arrangements with the States have been introduced in two stages. Under Stage 1, which commenced in 1976-77, the States receive a specified proportion of the net income tax collections made under the *States (Personal Income Tax Sharing) Act 1976*. Under Stage 2, in addition to the personal income tax imposed by the Commonwealth, each State has the right to impose a surcharge or grant a rebate on personal income tax in its State. The Commonwealth remains the sole collecting and administrative authority for all personal income tax. Relevant legislation is the *Income Tax (Arrangements with the States) Act 1978*.

Following discussions at Premiers' Conferences during 1981 and 1982, major changes have been made in the arrangements governing these payments.



Under previous tax sharing arrangements the overall level of funds allocated to the States each year was determined by a reference to a specified percentage of net personal income tax collections in the previous year. For 1982-83 and the subsequent two years, the States received a share of total Commonwealth tax collections in the preceding year. The definition of total tax collections base is set out in Schedule 1 to the *States (Tax Sharing and Health Grants) Act 1981*.

In 1981-82, a new form of general purpose (untied) revenue grants, termed 'identifiable general purpose health grants', replaced the former hospital cost sharing grants to the four States other than South Australia and Tasmania and certain other specific purpose payments for health which had been provided to all the States. The arrangements are an interim step towards full absorption of health grants into the tax sharing grants. In the case of South Australia, the Hospital Cost Sharing Agreement remained in place, and the identifiable health grants covered only assistance in lieu of payments formerly made under community health and school dental programs. At the 1983 Premiers' Conference, South Australia and Tasmania agreed to participate in the hospital funding aspects of Medicare on the basis that they terminate their hospital cost-sharing agreements with the Commonwealth from 1 February 1984 and receive additional payments under the *States (Tax Sharing and Health Grants) Act 1981*.

After an extensive enquiry into tax sharing relativities between the States, the Commonwealth Grants Commission presented its Report on State Tax Sharing Entitlements 1981 on 9 June 1981. The Commission found that a change in the State factors which prescribe the per capita tax sharing relativities between the States was desirable.

Its report was considered at the Premiers' Conference in June 1981 at which concern was expressed by the three less populous States at the magnitude of the changes in the distribution of the grants which adoption of the Commission's assessments would entail. At the Conference it was decided that the Commission should be asked to produce a further report on its assessment of State relativities in the light of submissions to be put to it by the States and by the Commonwealth.

The Commission presented its second report on 31 May 1982. While this report contained some changes in assessed relativities by comparison with its 1981 report, the Commission confirmed the view expressed in its earlier report that a change was desirable in the existing State factors which govern the distribution of shared tax revenue between the States.

The Commission's 1982 assessments were the subject of discussion between the Commonwealth and the States at a Premiers' Conference held in June 1982. At the Conference it was agreed, along with certain other proposals, to phase in the new relativities over three years ending 1984-85. Each State's tax sharing grant was made subject to a real terms guarantee (ensuring a 2 per cent real growth in its grant in 1982-83 and a 1 per cent real growth in each of the following two years) while the new relativities were being phased in.

The aggregate entitlement of the States for 1983-84 was \$8 538 million of which South Australia received a basic grant of \$953.8 million in accordance with agreed arrangements.

#### SPECIAL REVENUE ASSISTANCE

From time to time the Commonwealth has provided general revenue assistance to the States in addition to that payable under the personal income tax sharing entitlements or by way of special grants recommended by the Grants Commission.

A Premiers' Conference was held in February 1975 to discuss special revenue assistance for 1974-75. The Commonwealth agreed to provide the States with an additional \$60

million of which South Australia received \$6.6 million. As part of arrangements for the transfer of the non-metropolitan railway system of South Australia and the railway system of Tasmania to the Commonwealth, payments classified as special revenue assistance were made to the two States during 1974-75. South Australia received \$10 million and Tasmania \$5 million.

Following a meeting with the Premiers of Victoria and South Australia on 18 March 1983, the Commonwealth agreed to special once-off budgetary assistance in the form of grants to Victoria and South Australia of \$19.5 million and \$10.5 million respectively, to help alleviate the impact of the February bushfires on those State's budgets. This assistance was provided in addition to that provided under the natural disaster relief arrangements.

At the Premiers' Conference held on 30 June-1 July 1983, the Commonwealth agreed to provide the States with a special temporary revenue assistance grant of \$155.5 million, of which South Australia received \$17.2 million, in recognition of claims that they were facing unusually severe budgetary difficulties in 1983-84.

### CAPITAL GRANTS

At the June 1970 Premiers' Conference the Commonwealth undertook to provide a portion of the State's Loan Council programs in the form of capital grants. As a result of the *States Grants (Capital Assistance) Act 1970*, the Commonwealth distributed \$200 million to the States in 1970-71 in the same proportions as their borrowing programs.

The States Grants (Capital Assistance) Acts passed in 1972 provided for additional grants by way of capital assistance to the States for government primary and secondary schools during 1971-72 and 1972-73. These grants continued in the following years but from 1975-76 the capital grants have constituted one-third of each State's total Loan Council Program, except for 1982-83 where the approved program also included a supplementary grant of \$65 million for public housing. During 1983-84, the Commonwealth paid grants totalling \$489.7 million to the States, including \$63.8 million to South Australia.

### OTHER FINANCIAL ASSISTANCE

In addition to grants under the Financial Agreement, special grants recommended by the Grants Commission, personal income tax sharing entitlements, special revenue assistance and capital grants, the Commonwealth makes payments to the States for many specific purposes, some details of which are given in this section.

Figures in the following table are those which have been published in the latest issue of the budget paper 'Payments to or for the States, the Northern Territory and Local Government Authorities' and show the general pattern of Commonwealth Government payments to or for the State of South Australia for 1983-84 and four earlier years. Some amounts shown are repayable to the Commonwealth Government but repayable advances for war service land settlement are not included.

**Commonwealth Payments To or For the States, South Australia**

Particulars	1979-80	1980-81	1981-82	1982-83	1983-84
	\$'000				
Personal income tax sharing entitlements .....	630 392	691 540	761 027	864 097	953 830
Health grants .....	—	—	8 606	9 467	78 609
Special grants .....	—	—	—	—	—
Special revenue assistance .....	—	—	—	10 500	17 200
Loan Council borrowings .....	108 165	113 573	113 573	119 285	127 626
Capital grants .....	54 083	56 787	56 787	59 643	63 813

## Commonwealth Payments To or For the States, South Australia (continued)

Particulars	1979-80	1980-81	1981-82	1982-83	1983-84
SPECIFIC PURPOSES PAYMENTS: RECURRENT PURPOSES (\$'000)					
Sinking Fund on State Debt .....	4 771	5 007	5 259	5 516	5 722
Schools .....	44 714	53 289	64 728	77 632	83 558
Technical and further education .....	6 661	7 164	8 338	9 349	10 509
Universities .....	63 161	70 280	80 332	85 603	91 428
Colleges of advanced education .....	46 612	52 248	56 154	62 231	66 590
Pre-school education .....	3 730	3 730	3 730	3 730	3 730
School dental scheme .....	3 433	3 471	—	165	—
Public hospitals running costs .....	110 207	124 826	121 437	162 122	93 529
Children's services .....	2 036	2 534	2 700	3 295	3 510
Bovine Brucellosis and T.B. eradication .....	1 986	2 564	2 046	2 161	2 624
Aboriginal advancement .....	3 724	4 278	4 805	5 662	5 877
Assistance for local government .....	19 072	25 871	30 178	36 510	39 507
Special employment programs .....	—	—	—	8 773	8 773
Medicare .....	—	—	—	—	21 227
Community employment .....	—	—	—	—	21 739
Other .....	14 975	15 754	10 554	20 547	18 879
Total recurrent purposes ...	325 082	371 016	390 261	483 296	477 202
SPECIFIC PURPOSES PAYMENTS: CAPITAL PURPOSES (\$'000)					
Schools .....	14 821	13 275	14 666	16 028	16 706
Technical and further education .....	8 697	8 718	11 207	12 671	13 986
Colleges of advanced education .....	4 666	3 237	3 218	3 530	3 949
Universities .....	3 482	3 599	4 126	4 555	5 795
Rural adjustment scheme .....	2 554	2 433	2 298	2 538	4 723
Aboriginal advancement .....	2 231	2 101	2 157	2 466	895
Public housing .....	23 984	24 960	20 761	19 833	18 865
Land acquisition .....	7 329	8 186	—	—	—
Natural disaster relief .....	—270	—737	—	19 580	9 445
Urban water treatment .....	2 555	2 600	2 360	2 239	5 360
Roads .....	46 439	51 617	56 302	60 327	63 943
Pensioner housing grants .....	2 856	2 945	3 033	3 080	2 662
Other housing assistance .....	7 495	7 790	7 110	15 288	35 186
Urban public transport .....	4 000	4 308	192	—	—
Bicentennial roads .....	—	—	—	8 515	29 837
Log salvage .....	—	—	—	11 000	—
Special assistance for water .....	—	—	—	10 000	—
Upgrade transport systems .....	—	—	—	10 000	—
Other .....	7 379	7 088	8 905	13 853	18 647
Total capital purposes .....	138 218	142 120	136 335	215 503	229 999

## Schools

The Commonwealth has been providing assistance for schools in the States since 1964-65 when it provided grants for science laboratories and equipment.

The range of assistance has been progressively extended and grants are being made for both government and non-government schools according to the following categories: general recurrent grants, general building grants, and grants for science laboratories and equipment, libraries, schools for the handicapped, disadvantaged schools, migrant children, teacher development, innovatory projects and information programs.

The Schools Commission, established by the *Schools Commission Act 1973*, administers these programs of assistance. Total payments to the States in 1983-84 were \$1 271·0 million, of which South Australia received \$100·3 million.

### Universities

Grants to the States for recurrent expenditure of universities commenced in 1951-52; similar grants for capital works and equipment for universities were introduced in 1958. From 1974 the Commonwealth assumed full financial responsibility for universities.

The *Tertiary Education Commission Act 1977* established the Tertiary Education Commission as a replacement for the Universities Commission, the Commission on Advanced Education and the Technical and Further Education Commission. Relevant programs of assistance to the States towards these areas are administered by the Commission and currently are authorised under the *States Grants (Tertiary Education Assistance) Act 1981*. Total payments to the States in 1983-84 were \$1 036 million, of which South Australia received \$97·2 million.

### Colleges of Advanced Education

Grants to the States for colleges of advanced education commenced in March 1965. These grants were initially for capital purposes but at the start of the 1967-69 triennium were extended to cover recurrent grants. Grants to the States have been made since 1967-68 for teachers' colleges and since 1968-69 for pre-school teachers' colleges. In 1973-74 these grants were absorbed into an overall program of grants for colleges of advanced education. Assistance to the States for colleges of advanced education in 1983-84 was \$709·6 million, of which South Australia received \$70·5 million.

### Public Hospitals Running Costs

From 1975-76 specific purpose assistance was provided to all States under agreements drawn up under Section 30 of the *Health Insurance Act 1973*. Essentially, these agreements provided for the Commonwealth to meet, on the basis of budgets approved by the Commonwealth and State Health Ministers, half of the net operating costs of 'recognised' State public hospitals, subject to certain agreements regarding charging policies.

Agreements with four of the States (New South Wales, Victoria, Queensland and Western Australia) expired on 30 June 1981. Payments for public hospitals in these States have been replaced by identified health grants within the arrangements for general purpose payments for 1981-82 and later years under the *States (Tax Sharing and Health Grants) Act 1981*.

The agreements with the two remaining States (South Australia and Tasmania) remained in force until 1 February 1984 when cost-sharing payments were replaced by an addition to their identified health grants. These agreements had been due to expire on 30 June 1985.

Total payments to the States in 1983-84 were \$127·3 million, of which South Australia received \$93·5 million.

### Medicare Compensation

As part of its Medicare program, the Commonwealth makes payments to the States and the Northern Territory designed to ensure that no government is financially disadvantaged by the introduction of Medicare into its public hospital system.

The provision of these Medicare compensation grants is subject to a number of conditions and are provided on the basis that (i) the States and Northern Territory will

provide public hospital inpatient treatment in shared wards, and outpatient treatment, without change to persons defined as eligible by the *Health Insurance Act 1973* unless the patient elects to be treated as a private patient; and (ii) charges for persons electing to be treated as private patients are set at \$80 per day for the twelve-month period commencing on 1 February 1984, and thereafter to be adjusted at six-monthly intervals.

Total payments to the States and Northern Territory under these arrangements in 1983-84 were \$274.8 million, of which South Australia received \$21.2 million.

### **Public Housing**

Under successive arrangements between the Commonwealth and the States financial assistance has been made available to the States in one form or another since 1945-46 for the provision of housing, including assistance with home ownership, for families of low or moderate means.

Under the *Housing Assistance Act 1981* a five-year Housing Agreement has been executed with the States and the Northern Territory covering the period 1981-82 to 1985-86. In accordance with the Agreement the Commonwealth is to provide base financial assistance to the States and the Northern Territory amounting to \$200 million in each year of the Agreement. The Commonwealth may also provide additional financial assistance each year depending on budgetary and other circumstances. Loans (previously called 'advances') are repayable over 53 years and attract a concessional fixed rate of interest of 4.5 per cent per annum.

Total payments to the states made during 1983-84 were \$476.8 million with South Australia receiving \$44.4 million in the form of grants (including pensioner housing grants of \$2.7 million and \$5.6 million for Aboriginal rental housing), and \$18.9 million in the form of loans.

In addition to the funds provided under the Commonwealth-State Housing Agreement the States were given the option in 1983-84 of nominating additional amounts from their Loan Council borrowing program for the purpose of public housing. Amounts nominated are provided to the States on the same concessional terms that apply to loans under the Commonwealth-State Housing Agreement. State nominations under this arrangement totalled \$227.1 million in 1983-84.

### **Community Employment Program**

The *Community Employment Act 1983* provides for the Commonwealth to make available financial assistance to the States for direct job creation. The Community Employment program provides short term employment for three to twelve months, particularly for disadvantaged groups in the labour market such as women, migrants, the long-term unemployed and disabled persons. Funds are provided for expenditure on labour intensive projects and although emphasis is placed on providing jobs in areas experiencing relatively high unemployment rates funds are allocated to the States principally on a population basis.

Assistance given by the Commonwealth during 1983-84 was \$243.8 million of which South Australia received \$21.7 million.

### **Rural Adjustment**

The *States Grants (Rural Adjustment) Act 1976* provides for the Commonwealth to make available assistance for the purposes of a Rural Adjustment Scheme that embraces debt reconstruction, farm build-up, farm improvement, carry-on finance, rehabilitation and household support. Wine-grape producers became eligible in 1978-79 for carry-on finance assistance and assistance for beef and dairy producers was discontinued from 1979-80.

Assistance given by the Commonwealth during 1983-84 was \$43.2 million with South Australia receiving \$4.7 million including \$2.0 million in the form of loans.

### **Natural Disaster Relief**

Before 1971 State Governments were generally expected to contribute on a \$1:\$1 basis in meeting relief expenditure. This was changed in 1971 so that, for major disasters, the Commonwealth met all expenditures by a State in excess of a certain base amount set for that State. From 1978-79, above-base expenditures will be financed on a \$3 Commonwealth: \$1 State basis. The expenditures predominately are in the form of repayable advances.

During 1983-84 total assistance to the States was \$136.6 million. The bulk of the assistance was for drought and bushfire relief, and damage caused by extensive flooding particularly in New South Wales and Queensland. South Australia received \$4.5 million, \$5.6 million and \$1.2 million for drought, bushfire and flood relief respectively during 1983-84.

### **Urban Water Supply**

Since 1978-79, the Commonwealth has provided \$41.2 million to the States under the National Water Resources Program in respect of urban water supply facilities, including \$15.5 million in 1983-84 of which \$5.4 million was to assist towards the construction of water filtration plants in the Adelaide metropolitan area and \$2.3 million towards the construction of a water filtration plant on the Morgan-Whyalla Pipeline.

The Commonwealth also provided a special grant of \$10 million to South Australia in 1982-83 to upgrade the State's water supply facilities.

### **Roads**

Grants for road works have been made since 1923, and from 1931 to 1958 were based on a percentage of Commonwealth petrol taxation. A new scheme of assistance to the States for roads was established by the *Commonwealth Aid Roads Act 1959* in which the Commonwealth undertook to provide assistance for five-year periods.

Over the five years 1980-81 to 1984-85, the Commonwealth is to provide \$3 650 million to the States and Northern Territory as grants for road construction and maintenance under the *Roads Grants Act 1981*. Of this amount, \$751.8 million was provided to the States in 1983-84 with South Australia receiving \$63.9 million.

In addition to assistance provided under the *Roads Grants Act 1981*, the Commonwealth introduced in 1982-83 the Australian Bicentennial Road Development program with the overall aim of developing the Australian road system to a high standard by 1988, the bicentennial year. The program is financed by a surcharge on excise on motor spirit and distillate. The level of the surcharge applying from 1 July 1983 until the termination of the program on 31 December 1988 is two cents per litre. Assistance to the States and the Northern Territory under the program is made through the Australian Bicentennial Road Development Trust Fund. Grants paid to the States under this program amounted to \$410.6 million in 1983-84 of which South Australia received \$29.8 million.

### **Assistance for Local Government**

In 1973, new legislation passed by the Commonwealth Parliament laid down procedures for regional organisations of local government to apply for financial assistance from the Commonwealth. As a result of evidence placed before the Commonwealth Grants Commission, total grants of \$56.3 million in 1974-75 were recommended to be paid to local government authorities throughout Australia. South Australian authorities

received \$4.8 million. As part of the new personal income tax sharing arrangements between the Commonwealth and the States introduced at the beginning of 1976-77, a new agreement was reached for general assistance to local government authorities; this provided that local government authorities throughout Australia would receive 1.52 per cent of net personal income tax in each year. Amendments to the *Local Government (Personal Income Tax Sharing) Act 1976* have increased the entitlement to 1.75 per cent for 1979-80 and 2 per cent for 1980-81 and subsequent years. From 1976-77 the Commonwealth Grants Commission has recommended the grant to be paid to each State for assistance to local government authorities in that State. State Grants Commissions subsequently apportion this among separate authorities with consideration to a *per capita* element and a needs element. Assistance of \$459.3 million was made available in 1983-84 with South Australia receiving \$39.5 million.

### 11.3 STATE AUTHORITY FINANCE

The system of public finance statistics has been designed to complement the various sectors included in Australian National Accounts. The statistics consolidate details of the transactions of public authorities so that their economic impact can be assessed and show the purposes being served by the individual functions or programs. Transfers between funds and accounts within the accounting systems are eliminated by consolidation of the various accounts to reflect the net transactions of the non-financial public sector with the rest of the economy. Public financial enterprises such as banks and insurance companies are excluded from the statistics on the ground that combining their income or outlay on capital transactions with equivalent transactions of the public trading enterprises and general government would provide a less meaningful account of the public sector activity.

#### Classification Schemes

The financial statistics for the public sector essentially are a reclassification of information published in accounting statements of the public authorities supplemented by additional dissections of the reported transactions. The two main transactions classifications used in the compilation of government finance statistics are the economic transactions framework (ETF) and government purpose classification (GPC).

The economic transactions framework categorises outlays revenue and grants received and financing transactions according to their economic character to facilitate study of macro-economic effect of government activity on the economy and to provide basic building blocks for grouping transactions to be incorporated into the Australian National Accounts.

The government purpose classification is used to group outlays with similar functions to facilitate study of the broad purposes of public sector spending and assessment of the effectiveness of outlays in meeting government policy objectives. To facilitate international comparisons the GPC classification closely follows the same classification principles as the United Nations 'Classifications of the Functions of Government (COFOG)'.

Details of definitions and classifications used in the system of public finance statistics are given in *Classifications Manual for Government Finance Statistics, Australia* (1217.0)

#### State Authorities Receipts and Outlay

Details of receipts and financing transactions of South Australian State authorities have been consolidated from the accounts of the State Government departments and corporations and are classified in the following table to show the major sources of funds.

The classifications used in this and subsequent tables are in accord with those adopted by the United Nations in 'A System of National Accounts'. The Personal Income Tax Sharing Entitlement grants are the largest revenue source of State authorities.

**State Authorities: Receipts and Financing Transactions, South Australia**

Classification	1979-80	1980-81	1981-82	1982-83
	\$ million			
Revenue and grants received:				
Taxes, fees and fines .....	441.4	465.1	526.8	580.1
Net operating surplus of trading enterprises;				
Operating revenue .....	687.9	753.2	867.1	1 091.9
Operating expenditure .....	577.3	630.3	708.1	901.1
Property income:				
Income from public financial enterprises .....	4.2	4.7	7.3	8.1
Interest received .....	71.2	86.3	98.9	109.3
Other .....	11.1	12.6	14.6	16.1
Other revenue .....	16.2	17.6	13.2	25.1
Grants received;				
From the Commonwealth,				
For current purposes .....	955.5	1 062.6	1 159.9	1 367.3
For capital purposes .....	157.3	163.6	169.8	222.6
From local authorities .....	—	—	0.4	0.2
<b>Total revenue and grants received</b>	<b>1 767.3</b>	<b>1 935.5</b>	<b>2 149.9</b>	<b>2 519.7</b>
Financing transactions:				
Advanced from the Commonwealth (net) .....	109.7	110.4	76.4	129.2
Net borrowing;				
General government .....	17.0	5.4	6.2	14.1
Public trading enterprises .....	65.5	63.4	114.4	225.7
Deposits received (net) .....	-2.9	1.2	-1.6	3.2
Decrease in investments .....	-0.4	5.6	-6.6	-8.8
Decrease in currency and deposits ....	-69.8	46.1	25.0	42.0
Increase in provisions .....	55.1	49.1	46.7	59.9
Other funds available .....	5.3	-0.7	24.0	-28.9
<b>Total financing transactions .....</b>	<b>179.6</b>	<b>280.5</b>	<b>284.6</b>	<b>436.3</b>
<b>Total funds available .....</b>	<b>1 946.9</b>	<b>2 216.0</b>	<b>2 434.5</b>	<b>2 956.0</b>

The following table shows outlay of State authorities for the four years to 1982-83. There are separate sections for capital and current outlays; the fundamental distinction between current and capital transactions rests on whether the transactions are 'used up' over a period of one year or represent assets which generate a future stream of assets. Final consumption expenditure is the expenditure on goods and services by public authorities, other than those classified as public trading enterprises and consists essentially of expenditure on wages salaries and supplements plus purchase of goods and services from public trading enterprises and other sectors of the economy. Fees and charges for services rendered and sales of goods and services by general government



authorities have been off-set against gross expenditure to give final consumption expenditure. Because users of government finance statistics may be interested in the gross as well as the net value of general government outlays provision has been made to show both the payments and offsetting receipts adjacent to each other in the table.

Current transfer payments do not involve goods or services but can be required or unrequited. Required transfers involve payment for property rights (*e.g.* interest payments) and unrequited transfers do not involve any goods, services or property rights in return for payments. Unrequited transfers include transfers to persons (*e.g.* age pensions), to enterprises (subsidiaries), to overseas (*e.g.* foreign aid), to non-profit institutions and to other governments.

Net advances paid are the only repayable transactions which are included in outlays and not in financing items. Advances are included in outlays because they are used as an instrument of government policy to fund other levels of government, or to direct expenditure towards particular purposes designed to achieve specific government policies, and are considered to be capital since they are transactions in financial assets and therefore appear in the capital account in national accounts.

Grants are voluntary, non-repayable, unrequited transfers for the purpose of financing the current operations of the recipient. Grants between State authorities have been eliminated on consolidation in the table below.

**State Authorities: Outlay, South Australia**

Classification	1979-80	1980-81	1981-82	1982-83
\$ million				
Current outlay:				
Final consumption expenditure;				
Gross current expenditure .....	1 269.2	1 457.0	1 605.2	1 847.1
Offsetting receipts from sales ...	162.4	178.0	204.9	242.2
Required current transfer payments;				
Interest payments,				
To Commonwealth on advances .....	177.2	199.9	213.4	237.0
Other .....	57.4	68.2	80.8	116.1
Unrequited current transfer payments;				
Subsidies paid .....	59.0	57.0	68.9	86.2
Personal benefit payments .....	23.2	19.5	21.2	40.6
Current grants,				
To non-profit institutions .....	54.9	68.0	78.2	96.8
To local authorities .....	20.6	29.1	33.7	43.6
Total current outlay .....	1 499.0	1 720.8	1 896.7	2 225.1
Capital outlay:				
Gross fixed capital expenditure ...	407.5	429.2	493.5	633.1
Increase in stocks .....	4.9	8.8	6.4	14.1
Expenditure on land and intangible assets .....	7.1	5.5	-3.2	-5.3
Capital transfer payments;				
Capital grants,				
To Private sector and public financial enterprises .....	6.7	8.0	12.7	22.0
To Local authorities .....	14.7	14.4	13.4	17.4

## State Authorities: Outlay, South Australia (continued)

Classification	1979-80	1980-81	1981-82	1982-83
\$ million				
Capital outlay (continued):				
Advances paid (net)				
To public financial enterprises .....	24.4	29.2	32.2	18.2
To private sector .....	-17.3	0.1	-17.1	31.4
Other .....	—	—	—	- 0.1
Total capital outlay .....	447.9	495.2	537.8	730.9
Total outlay .....	1 946.9	2 216.0	2 434.5	2 956.0

The following table shows outlay of State authorities classified by purpose of public sector spending. Education accounted for 29.3 per cent of total outlay in 1982-83. Further information for education, health and social security is given in Parts 6.2, 6.5, and 6.6.

## State Authorities: Outlay by Purpose, South Australia

Classification	1979-80	1980-81	1981-82	1982-83
\$ million				
General public services .....	79.0	77.3	83.8	108.2
Public order and safety .....	118.3	138.0	157.1	183.1
Education .....	623.5	712.8	760.7	865.6
Health .....	311.2	362.2	391.1	416.0
Social security and welfare .....	49.5	48.9	53.1	86.3
Housing and community amenities ..	117.4	138.7	147.8	167.4
Recreation and culture .....	51.6	54.9	60.1	68.3
Fuel and energy .....	80.7	105.5	148.4	241.6
Agriculture, forestry, fishing and hunting .....	46.8	56.5	55.9	69.7
Mining, manufacturing, construction	14.3	17.9	29.6	32.7
Transport and communications .....	177.4	182.9	194.4	249.6
Other economic affairs .....	25.3	29.8	31.5	34.6
Other purposes .....	252.0	290.7	321.0	433.0
Total outlay .....	1 946.9	2 216.0	2 434.5	2 956.0

## State Taxation

Until the introduction of the uniform income tax scheme in 1942-43, income tax was the major source of taxation receipts in South Australia. Receipts from this form of taxation for the years 1939-40 to 1941-42 were \$4 718 000, \$4 952 000 and \$5 638 000 respectively or 51.70 per cent, 57.02 per cent, and 59.45 per cent of total receipts from taxation. The major forms of taxation then left to the State were payroll tax, motor tax, succession and stamp duties, and land tax, but legislative changes in 1980 have subsequently reduced the levels of succession duties, land tax, and gift duties. Stamp duty is payable on a wide range of instalment purchase, leasing and other lending transactions.

In addition to the fields of taxation open to the State Government, there are fields of taxation in which the Commonwealth Government has sole taxing authority, e.g. cus-

toms and excise duties and sales tax. Before 1942 the Commonwealth levied income tax in addition to that imposed by the States but since the commencement of uniform taxation the Commonwealth has been the sole levier of income tax. Commencing in 1977-78, under the new personal income tax-sharing arrangements, each State will have the right to impose a surcharge or grant a rebate on personal income tax in its State. Any State surcharges or rebates will be collected or paid by the Commonwealth on behalf of the States. To date no State has imposed a surcharge or granted a rebate under the income tax-sharing arrangements. Total taxation collected by the Commonwealth in South Australia far exceeds State taxation. Total Commonwealth taxation collected in South Australia in 1982-83 was \$2 666.0 million.

## State Authorities: Taxation, South Australia

Particulars	1979-80	1980-81	1981-82	1982-83
	\$ million			
Employers' payroll taxes .....	165.0	183.9	205.9	222.8
Taxes on property:				
Land taxes .....	21.3	17.3	19.3	23.7
Taxes on immovable property n.e.c. ....	0.5	0.5	0.7	0.9
Estate inheritance and gift duty ...	18.5	2.6	0.2	0.1
Stamp duties .....	69.4	77.7	85.0	91.1
Taxes on provision of goods and services:				
Levies on statutory authorities ....	10.3	12.2	14.8	19.1
Taxes on gambling,				
Taxes on government lotteries .	16.0	15.9	18.2	19.4
Taxes on private lotteries .....	0.9	1.4	2.3	2.1
Race betting taxes .....	11.8	12.3	11.1	14.1
Taxes on insurance;				
Insurance companies' contribu-				
tions to fire brigades .....	11.1	12.8	14.4	17.9
Third party insurance taxes ....	2.0	2.0	2.0	2.0
Taxes on insurance n.e.c. ....	—	—	0.9	1.4
Taxes on use of goods and perform-				
ance of activities:				
Motor vehicle taxes;				
Vehicle registration fees and				
taxes .....	38.4	40.3	44.4	51.0
Stamp duty on vehicle registra-				
tion .....	17.7	19.1	21.8	25.5
Drivers' licences .....	4.8	4.1	5.3	7.7
Road transport and maintenance				
taxes .....	1.2	0.2	0.1	0.2
Franchise taxes;				
Gas franchise taxes .....	4.8	5.2	9.0	3.2
Petroleum products franchise				
taxes .....	14.2	20.2	23.8	25.8
Tobacco franchise taxes .....	10.3	10.7	14.6	16.1
Liquor franchise taxes .....	12.5	13.9	15.9	18.9
Other taxes on use of goods etc ...	0.3	0.4	0.6	0.7
Fees and fines:				
Fees from regulatory services ....	4.1	4.3	6.6	6.5
Fines .....	6.2	8.1	9.9	10.2
Total taxation .....	441.4	465.1	526.8	580.1

## Public Trading Enterprises

Three government departments and a number of public corporations in South Australia are regarded, for statistical purposes, as public trading enterprises or business undertakings because they seek to cover a substantial part of their cost by selling goods and services to the public. The government departments concerned are Marine and Harbors, Engineering and Water Supply, and Woods and Forests while some of the larger public corporations similarly regarded as business undertakings are the Electricity Trust, Housing Trust, State Transport Authority, Pipelines Authority and the Lotteries Commission.

Particulars for all public trading enterprises during the last four years have been consolidated according to the Australian Standard Industrial Classification (ASIC) in the next table to show operating revenue and expenditure and net operating surplus. Operating expenditure includes provisions such as depreciation, long service leave and superannuation but excludes interest paid on borrowings and appropriations to reserves, *e.g.* future plant replacement.

**State Authorities: Public Trading Enterprises, Operating Revenue and Expenditure  
South Australia**

ASIC Division	1979-80	1980-81	1981-82	1982-83
\$ million				
OPERATING REVENUE (a)				
C Manufacturing .....	75.5	81.5	78.9	87.8
D Electricity, gas and water .....	324.4	376.5	457.9	576.9
E Construction .....	23.3	22.9	25.5	24.6
G Transport and storage .....	126.2	137.2	164.1	228.1
I Finance, property and business services ...	92.9	87.4	87.6	115.0
L Recreation, personal and other services ....	45.5	47.7	53.0	59.4
Total operating revenue .....	687.9	753.2	867.1	1 091.9
OPERATING EXPENDITURE (b)				
C Manufacturing .....	65.2	71.2	73.0	85.9
D Electricity, gas and water .....	256.0	291.9	335.7	416.8
E Construction .....	13.7	15.8	17.1	20.7
G Transport and storage .....	116.7	136.2	165.1	229.0
I Finance, property and business services ...	83.6	74.1	72.3	99.2
L Recreation, personal and other services ....	42.0	41.0	45.0	49.5
Total operating expenditure .....	577.3	630.3	708.1	901.1
NET OPERATING SURPLUS (b)				
C Manufacturing .....	10.3	10.4	5.9	1.8
D Electricity, gas and water .....	68.4	84.6	122.2	160.1
E Construction .....	9.6	7.1	8.4	3.9
G Transport and storage .....	9.5	1.0	-1.0	-0.9
I Finance, property and business services ...	9.3	13.3	15.3	15.8
L Recreation, personal and other services ....	3.5	6.7	8.0	9.9
Total net operating surplus .....	110.6	122.9	159.0	190.8

(a) Includes subsidies received on account of operating losses.

(b) Excludes interest payments on borrowings.

## LOAN RAISING AND THE PUBLIC DEBT

**State Debts Taken Over by the Commonwealth**

Under the Financial Agreement the Commonwealth took over on 1 July 1929 State responsibilities to bond-holders in respect of State debts existing on 30 June 1927; and all debts of each State existing on 1 July 1929 for money borrowed by that State are deemed to be money borrowed by the Commonwealth for and on behalf of the State. The Commonwealth agreed to contribute one-third of sinking funds required to repay those debts over a period of fifty-eight years.

Also for a period of fifty-eight years from 1 July 1927 the Commonwealth agreed to contribute the sum of \$15 169 824 (\$1 407 632 for South Australia) each year towards the interest payable on the State debts. The balance of the interest payable on State debts was to be paid into the National Debt Sinking Fund by the States.

The *Financial Agreement Act 1976* provided for the transfer of \$1 000 million of State debt to the Commonwealth from 30 June 1975. The Act also provided for new sinking fund arrangements in respect of State debt.

As a result of the transfer of the South Australian non-metropolitan railway system, \$124 000 000 of State debt was taken over by the Commonwealth.

**Australian Loan Council**

One of the main features of the Financial Agreement was the establishment of the Australian Loan Council which was set up to co-ordinate the borrowings of the Commonwealth and State Governments. It consists of the Prime Minister of Australia, or another Minister nominated by him, as chairman, and the State Premiers, or Ministers nominated by them.

Each year, the Loan Council examines the loan programs of the Commonwealth and State Governments and determines the total amount to be borrowed during the year. Borrowings by the Commonwealth for defence purposes are not subject to decisions of the Loan Council.

Subject to the decisions of the Loan Council the Commonwealth arranges for all borrowings for or on behalf of itself or any State, and for all conversions, renewals, redemptions, and consolidations of the securities issued on behalf of the Commonwealth and State Governments. If the Loan Council unanimously decides, however, a State may borrow outside Australia in its own name, and may issue securities for the amount so borrowed. The Commonwealth then guarantees that the State will fulfil its obligations to bond-holders in respect of the money so borrowed, and the money is deemed to be borrowed by the Commonwealth for and on behalf of the State.

Subject to any maximum limits decided upon by the Loan Council for interest, brokerage, discount, and other charges, the Commonwealth or any State Government may borrow within its own territory, for any purpose, money from any authorities, bodies, funds, or institutions (including savings banks) constituted or established under Commonwealth or State law or practice; borrow from the public by means of counter sales of securities; and use any available public moneys. However, any securities issued for moneys so borrowed or used must be Commonwealth Government securities on terms approved by the Loan Council.

Under the *Gentleman's Agreement* originating in 1936, the Loan Council has approved an aggregate annual new money borrowing program for 'larger' semi-government and local authorities. In June 1982, Loan Council agreed that for a trial period of three years, the amount and terms and conditions of domestic borrowings by electricity authorities of the Commonwealth or the States should be determined by the respective Governments.

At the June-July 1983 meeting of the Loan Council it was agreed to give greater

freedom to non-electricity authorities with respect to the terms, conditions, timing and interest rates applicable to their domestic borrowings. However the Loan Council would still retain control over the amounts of such borrowings and, as part of the overall arrangements agreed for 1983-84, informal limits were also reintroduced for electricity authorities. The Loan Council also agreed that State 'larger' authorities (including electricity authorities) would be permitted to borrow up to \$800 million in the course of 1983-84. The terms and conditions of any overseas borrowings are subject to the approval of the Loan Council on a case-by-case basis and Commonwealth agreement is required for all such borrowings.

### National Debt Commission

The National Debt Commission and the National Debt Sinking Fund, which it administers, were created under the *National Debt Sinking Fund Act 1923*. All previously existing sinking funds relating to Commonwealth debt were merged in the National Debt Sinking Fund at the time of its establishment; and under the provisions of the Financial Agreement of 1927 all relevant interest and principal contributions by both the Commonwealth and State Governments, in respect of State debts, are negotiated through the Fund. These contributions are not accumulated but are applied by the Commission to the redemption of the public debts of the States, and the repurchase of securities issued in respect thereof. Under the provisions of the Financial Agreement, repurchased or redeemed securities must be cancelled, and the debts of the States are reduced accordingly.

### The Public Debt

The following table gives details of State Government indebtedness and debt servicing at 30 June 1983 and for the three previous years.

State Government Indebtedness and Debt Servicing, South Australia

Particulars	1979-80	1980-81	1981-82	1982-83
	INDEBTEDNESS			
	\$m	\$m	\$m	\$m
Public Debt (a)				
Loans raised during period:				
New moneys .....	108.5	116.6	118.8	94.3
Conversion and/or redemption purposes .. less	80.6	199.1	325.0	293.3
Conversion and/or redemption of matured securities .....	80.6	199.1	325.0	286.1
Redemption by the National Debt Commission .....	29.1	25.5	28.9	28.3
At 30 June .....	1 781.6	1 872.7	1 962.6	2 035.8
Other indebtedness at 30 June:				
Liability under Commonwealth agreements .....	759.1	769.4	705.8	765.8
Liability on trust and other funds .....	122.3	116.9	98.3	96.8
Total public debt and other indebtedness ....	2 663.0	2 759.0	2 766.7	2 898.3
	\$	\$	\$	\$
Per head of population .....	2 035.3	2 092.1	2 082.3	2 160.5

## State Government Indebtedness and Debt Servicing, South Australia (continued)

Particulars	1979-80	1980-81	1981-82	1982-83
	DEBT SERVICING			
	\$m	\$m	\$m	\$m
Interest paid:				
Loan Council borrowings .....	137.6	160.1	181.4	203.2
Commonwealth Government advances .....	39.5	39.7	32.0	33.7
Trust funds and other moneys .....	3.6	4.3	5.1	6.1
Debt Redemption:				
Sinking fund payments on Loan Council borrowings .....	24.4	25.5	26.8	28.1
Repayment of Commonwealth Government loans .....	9.1	13.0	33.4	14.4
Total debt servicing .....	214.2	242.6	278.7	285.5
	\$	\$	\$	\$
Per head of population .....	164.2	184.8	210.5	213.9

(a) Face value of securities issued on behalf of the State by the Commonwealth in accordance with the Financial Agreement.

## South Australian Government Financing Authority

The South Australian Government Financing Authority (SAFA) was established under the Government Financing Authority Act, 1982. The Authority's main function is to act as a central borrowing authority for the State's statutory authorities with the approval of the Treasurer it may engage in a broad range of activities including the borrowing of moneys from within or outside Australia and the lending of moneys to statutory authorities.

As part of the re-arrangement of State public sector debt, the Treasurer made a number of determinations under Section 18 of the Government Financing Authority Act. These determinations were effective in most cases from 16 March 1984 and involved;

- (a) securities of semi-government authorities (other than the Electricity Trust, universities and the Roseworthy Agricultural College) outstanding to third parties were assumed by SAFA and in turn the authorities became indebted to SAFA; and
- (b) statutory authorities with loans outstanding to the State Government were deemed to be indebted to SAFA and in turn SAFA became indebted to the Government.

Further restructuring took place in June 1984 when State-owned financial institutions transferred a large part of State public sector securities held by them to SAFA and in return the State Government became indebted to those financial institutions.

## Further References

Additional information may be found in the following publications:

- 5501.4    *State Authorities Finance—South Australia*
- 5504.0    *State and Local Government Finance—Australia*

## 11.4 LOCAL GOVERNMENT FINANCE

For the purpose of determining the scope of local government finance statistics, a local government authority is defined as:

- (a) an authority set up under a local government Act to carry out the functions of local government in a defined area (known as a municipality or district council area) the members of which are elected by persons enrolled as electors for the House of Assembly in respect of an address within the area, or who are ratepayers in respect of ratable property within the area. A body corporate is enrolled under the name of a nominated agent; or
- (b) an authority created or acquired by a local government authority (as defined above) or by two or more local government authorities (in South Australia an authority established under Part XIX or Section 666(c) of the Local Government Act, 1934-1985).

The organisation and functions of local government have been described in Part 3.5.

The expenditure of moneys by local government bodies is authorised by the Local Government Act, 1934-1985. Under the Act each council is required to prepare a balance sheet and statement of its accounts on an accrual basis for each financial year and these statements are the basis of the statistics published on local government finance.

### Assessments

Assessments for property rating are based upon capital value or site value. Capital value means the capital amount that the land might reasonably be expected to realise upon sale; whereas site value means the capital amount the land might reasonably be expected to realise upon sale excluding any improvements on the land. For the purposes of this definition, 'improvements' means buildings and structures and trees planted for commercial purposes. A council may adopt the 'capital' valuations or the 'site' valuations of the State Valuer-General or may make its own valuation of properties. Most councils in South Australia have adopted the valuation of the Valuer-General.

### Revenue Transactions

Rates are the principal source of revenue of local government authorities and represented 49.1 per cent of total revenue in 1982-83. Remissions are allowed on portions of the council rates levied on pensioner's and certain other properties but the value of remissions is refunded to the council by a State Government subsidy. Details of rates shown in this Part refer to total rates accrued during the year plus *ex-gratia* receipts, *i.e.* net of all remissions and reductions but including penalties and subsidies. Some properties, *e.g.* those occupied by Commonwealth or State Government authorities, are exempt from rating but an *ex-gratia* payment may be made by such authorities in lieu of rates.

The Commonwealth *Local Government (Personal Income Tax Sharing) Act 1976* specified that 1.75 per cent of net personal income tax collections in 1979-80 increasing to 2.0 per cent in 1980-81, be allocated to local government and that 30 per cent of this allocation be shared on a population basis with the remainder on a basis that ensures that each local governing body is able to function, by reasonable effort, at a standard not appreciably below the standards of other local governing bodies. These requirements are embodied in the South Australian Local Government Grants Commission Act, 1976 under which the States allocation is distributed as per head and special grants. These grants totalled \$36.4 million in 1982-83 and are shown as general purpose government grants in the following table. Details of revenue from ordinary services, as distinct from business undertakings, and loan receipts during the five years to 1982-83 are as follows.



**Local Government Authorities: Ordinary Services, Revenue and Loan Receipts  
South Australia**

Particulars	1978-79	1979-80	1980-81	1981-82	1982-83
\$ million					
Rates (including penalties) .....	95.5	105.2	119.2	133.2	151.6
Licences, fees and fines .....	4.3	5.3	5.8	6.3	7.0
Charges for services .....	16.9	19.9	21.0	21.9	26.8
Contributions and donations .....	17.9	2.4	2.4	3.1	2.8
Reimbursements received .....		7.3	8.6	10.1	12.6
Interest received .....		4.8	7.1	10.8	11.4
Sale of land and other fixed assets ..		3.2	4.5	2.6	(a) 10.1
Other .....		—	—	—	0.4
Government grants:					
General purpose .....	15.4	19.0	25.8	30.1	36.4
Specific purpose .....	19.0	19.5	19.5	22.0	28.4
Total revenue .....	169.1	186.6	213.8	240.0	287.4
Loan receipts .....	23.7	25.4	25.9	23.0	21.1
<b>Total revenue and loan receipts .....</b>	<b>192.8</b>	<b>211.9</b>	<b>239.6</b>	<b>262.9</b>	<b>308.6</b>

(a) Gross proceeds from sale of assets from 1982-83, previously net surplus/deficit on sale.

The source data prepared by local governing bodies in the annual financial statements were supplied in accordance with the 'Local Government Accounting Regulations 1979' and are in a format different to that used in previous years. The changes in the new Regulations, which operated from 1 July 1979, resulted in more precise detail being available on the financial transactions of local authorities and many items identified from 1979-80 are not comparable directly with items reported in earlier years. To enable a better comparison with the transactions of Commonwealth and State authorities, as well as with all other local authorities throughout Australia, the transactions reported have been reclassified in a system which tabulates in all States local government finance data on a uniform basis.

**Local Government Authorities  
Ordinary Services, Selected Revenue by Purpose, South Australia, 1982-83**

Particulars	Charges for Services	Contributions and Donations	Reimburse- ments	Specific Purpose Government Grants	
				Capital	Current
\$'000					
General administration .....	—	—	651	—	—
Public order and safety .....	189	150	126	699	642
Health .....	443	68	115	3 007	883
Welfare .....	929	191	13	232	1 161
Housing and community amenities:					
Housing .....	584	47	—	197	—
Sanitary and garbage .....	1 051	—	80	—	—
Sewerage .....	1 265	—	53	2 400	130
Urban stormwater .....	—	497	29	1 071	28
Other .....	1 098	16	—	426	389
Recreation and culture .....	7 255	243	194	1 401	4 111
Agriculture and forestry .....	78	1	682	—	333
Building control .....	—	—	74	—	—
Mining and manufacturing .....	67	—	—	—	—

**Local Government Authorities**  
**Ordinary Services, Selected Revenue by Purpose, South Australia, 1982-83 (continued)**

Particulars	Charges for Services	Contributions and Donations	Reimbursements	Specific Purpose Government Grants	
				Capital	Current
\$'000					
Transport:					
Roadworks .....	—	1 540	9 425	8 763	1 316
Parking .....	6 082	1	42	64	—
Other .....	527	12	9	122	510
Other economic affairs:					
Tourism and area promotion .....	2 685	11	13	213	67
Saleyards and markets .....	1 646	—	—	—	—
Other .....	83	—	24	26	13
Natural disaster relief .....	—	6	—	50	185
Other purposes n.e.c. ....	2 849	—	1 069	—	—
Total .....	26 830	2 782	12 600	18 669	9 766

Selected revenue for 1982-83 is shown in a purpose classification in the table above; rates, licences and general purpose government grants are excluded because these items are not appropriate to a purpose classification.

### Loan Receipts

Under the provisions of the Local Government Act councils may, with the consent of electors, borrow money for carrying out permanent works and undertakings, on the security of the general rates and subject to conditions specified in the Act. Notice of the intention to borrow is published in the Gazette and in the local press. The consent of electors is deemed to be obtained unless objections in writing are submitted to the council office within one month in which case a poll is conducted. Loans in excess of \$1.8 million are subject to Loan Council approval.

Loans raised by local government authorities during 1982-83 totalled \$21.1 million for ordinary services and \$0.7 million for electricity undertakings. Most of these loans were raised with Australian banks.

### Outlay transactions

The functions of local government have been described earlier in this Year Book in Part 3.5 Constitution and Government—Local Government, and subsequent references. Outlay of funds for major functions are identified in the following two tables but the comparability of some data between 1982-83 and earlier years may be affected by changes in classifications and by reporting procedures associated with the adoption of the Local Government Accounting Regulations 1979 in South Australia and the introduction of the new local government finance system in all States.

A number of differences occur between the presentation of local government finance statistics and those of other levels of government. Public sector finance statistics generally are prepared on a net basis in which selected receipts are offset against relevant outlays, and *vice versa*, but in local government finance statistics transactions are shown as gross values and subsequently adjusted to the net basis when consolidated into the State and local government sector accounts. For this reason the tables which follow show 'current outlay on goods, services and land' rather than the net concept of final consumption expenditure.

A summary of ordinary services outlay of local government authorities during the five years to 1982-83 is shown in the next table.

**Local Government Authorities: Ordinary Services, Outlay, South Australia**

Particulars	1978-79	1979-80	1980-81	1981-82	1982-83
\$ million					
Outlay on goods, services and land:					
Capital:					
New fixed assets,					
Roadworks construction .....	30.0	30.3	34.2	39.2	43.2
Other .....	29.4	36.9	36.6	41.4	43.5
Land and other fixed assets .....	3.3	3.0	5.4	6.2	7.0
Current:					
General public services .....	18.8	21.3	25.0	29.8	35.3
Roadworks, maintenance .....	21.1	22.5	25.9	28.6	33.1
Other .....	69.3	66.9	78.3	90.8	105.7
Total outlay on goods, etc. ....	171.9	180.8	205.3	236.0	267.8
Debt charges:					
Interest .....	18.9	{	12.7	14.7	17.3
Debt redemption .....			9.5	10.4	11.9
Levies paid to government .....			4.3	4.2	3.4
Donations paid .....			—	1.9	1.5
Other .....			0.9	—	0.3
Total outlay .....	190.8	208.2	236.6	270.1	305.7

Local authorities engage in a number of trading activities or business undertakings such as electricity supply schemes and caravan parks, but these activities generally have not been classified as trading activities in the local government finance statistics unless annual revenue, measured in terms of 1977-78 prices, is greater than \$500 000. Consequently most activities of local government in South Australia are classified to the relevant general government function.

A third difference between the statistics of local government and other levels of government is the treatment of expenditure on roads. Where statistics are consolidated for all levels of government all expenditures on roads are treated as capital expenditure because of difficulties in achieving a consistent distinction between new construction and maintenance work. In the local government finance system, however, this distinction has been accepted arbitrarily on the basis of data reported by local authorities in the annual statements, these being prepared in accordance with guidelines contained in a *South Australian Local Government Accounting Manual* issued to all local government offices by the Department of Local Government.

Particulars of outlay from revenue and loan funds on goods, services and land for the year 1982-83 are classified by purpose in the following table. Construction and maintenance of roadworks accounted for 28.5 per cent of the outlay on goods, services and land.

**Local Government Authorities: Ordinary Services, Outlay on Goods, Services and Land  
South Australia, 1982-83**

Purpose	Outlay from Revenue		Outlay from Loans		Total
	Capital	Current	Capital	Current	
			\$'000		
General public service .....	2 998	35 318	1 357	—	39 673
Public order and safety .....	1 234	3 163	38	—	4 435
Health .....	5 059	4 089	998	—	10 146
Welfare .....	482	2 931	598	—	4 011
Housing and community amenities:					
Sanitary and garbage .....	512	18 349	167	—	19 028
Sewerage .....	2 543	622	732	—	3 897
Urban stormwater .....	3 717	1 513	1 983	3	7 216
Other .....	3 766	14 657	573	—	18 996
Recreation and culture:					
Recreation and sport .....	4 262	23 650	1 066	10	28 988
Libraries .....	909	8 108	430	—	9 447
Other .....	1 298	6 207	217	—	7 722
Agriculture and forestry .....	29	2 033	—	—	2 062
Building control .....	70	3 464	—	—	3 534
Mining and manufacturing .....	6	29	—	—	35
Transport:					
Roadworks .....	35 031	32 223	8 202	828	76 284
Parking .....	723	6 113	483	—	7 319
Other .....	317	1 343	203	—	1 863
Other economic affairs:					
Tourism and area promotion .....	947	2 395	156	—	3 498
Saleyards and markets .....	1 329	918	29	—	2 276
Other .....	250	586	—	—	836
Other purposes n.e.c. ....	8 651	5 469	2 397	—	16 517
Total outlay .....	74 130	173 178	19 627	841	267 776

### Electricity Undertakings

Nine councils on Eyre Peninsula and in the northern areas of the State operate electricity supply schemes in which electricity is either generated or purchased from the Electricity Trust of South Australia and distributed to ratepayers on council power lines. During 1982-83 current outlay consisting of working expenses and interest paid on loans raised for these schemes totalled \$6.2 million. Gross capital formation and debt redemption-principal repayments totalled an additional \$0.7 million.

Electricity undertakings are classified as trading activities in local government finance statistics and details of the transactions are not included in the ordinary services of local government authorities.

### Further References

Additional information may be found in the following publications:

- 5501.4 *State Authorities Finance—South Australia*
- 5502.4 *Local Government Finance—South Australia*
- 5504.0 *State and Local Government Finance—Australia*

## 11.5 AUSTRALIAN NATIONAL ACCOUNTS

National accounting aims at providing a systematic summary of the transactions taking place in the economy, especially of those that relate to the production and use of goods and services, and to transfers of income or capital between sectors of the economy.

### Concepts

The fundamental concepts of domestic product and national income and expenditure are described below.

*Gross Domestic Product at Market Prices* (usually referred to as Gross Domestic Product) is defined as the total market value of goods and services produced in Australia after deducting the cost of goods and services used up in the process of production but before deducting allowances for the consumption of fixed capital. It is the sum for all producers of the value of their sales (including any indirect taxes levied thereon), plus increases in their stocks, less their purchases of intermediate goods and services from other producers. For those producers, like general government, who do not generally sell their output, it includes output valued at cost instead of sales.

*Gross Domestic Product at Factor Cost* is that part of the cost of producing the Gross Domestic Product which consists of gross payments to factors of production (labour, land, capital and enterprise). It represents the value added by these factors in the process of production and is equivalent to Gross Domestic Product less indirect taxes plus subsidies. Gross Farm Product at Factor Cost is that part of Gross Domestic Product at Factor Cost arising from production in rural industries.

*Domestic Factor Incomes* is that part of the value added within a given period by factors of production which accrues as income to their suppliers after allowing for the depreciation of fixed capital. It is equivalent to Gross Domestic Product at Factor Cost less depreciation allowances.

*National Income* is the net income accruing within a given period to Australian residents from their services in supplying factors of production in Australia or overseas plus indirect taxes less subsidies. It is equivalent to Domestic Factor Incomes plus indirect taxes less subsidies and net income paid overseas. It is also equivalent to Gross Domestic Product less depreciation allowances and net income paid overseas.

*National Disposable Income* is the net income accruing within a given period to Australian residents from their services in supplying factors of production, from net indirect taxes and from redistributive transfers. It is equivalent to National Income less net transfers overseas.

*National Turnover of Goods and Services* is the total flow within a given period of final goods and services (*i.e.* excluding any goods and services used up during the period in the process of production) entering the Australian economy from production and imports. This value is equivalent to Gross Domestic Product plus imports of goods and services, or, to Gross National Expenditure plus exports of goods and services.

*Gross National Expenditure* is the total expenditure within a given period on final goods and services (*i.e.* excluding goods and services used up during the period in the process of production) bought by Australian residents. It is equivalent to Gross Domestic Product plus imports of goods and services less exports of goods and services.

### Sectors

A brief description of the sectors into which the economy is divided for the purpose of National Accounts follows.

The *Corporate Trading Enterprise Sector* includes companies and public enterprises other than financial enterprises. It thus includes all trading enterprises other than unincorporated enterprises and dwellings owned by persons. This sector comprises only resident enterprises, but the concept of resident enterprises includes Australian subsidiaries and branches of overseas-owned companies and excludes overseas subsidiaries and branches of Australian companies. All public trading enterprises are included in this sector whether they are incorporated bodies or not.

The *Financial Enterprise Sector* includes both private and public financial enterprises.

Financial enterprises are enterprises which are primarily engaged in financial transactions in the market consisting of both incurring liabilities and acquiring financial assets. These are organisations which are regarded as providing the financial mechanism for the functioning of the economy. They include life insurance and general insurance offices and superannuation funds as well as other organisations mainly engaged in borrowing and lending in the market.

The *Household Sector* includes all resident persons, their unincorporated enterprises located in Australia and dwellings owned by persons, and non-profit organisations serving households, other than non-profit organisations included in the Financial Enterprise Sector.

The *General Government Sector* excludes public financial and trading enterprises, but otherwise includes the whole of the activities of the Commonwealth Government, State Governments, local authorities and public corporations.

The *Overseas Sector Account* records all transactions between Australian persons, businesses and governments and overseas residents. Australian subsidiaries and branches of overseas companies are classified as resident units, while overseas subsidiaries and branches of Australian companies are classified as non-residents.

### Description of the Accounts

The *Domestic Production Account* is shown as receiving the revenue from the sale of goods and services to final buyers; all intermediate goods and services are cancelled out, since they represent a cost to one producer to offset the revenue of the other. On the payments side are shown the payments of indirect taxes less subsidies and, since the account is presented from the point of view of the producing unit, the wages and salaries paid to employees.

The *National Income and Outlay Account* is shown as receiving wages, salaries and supplements, net operating surplus and indirect taxes less subsidies from the Domestic Production Account. From this income are deducted net payments of income and miscellaneous transfers to overseas, and the remainder is the National Disposable Income. The outlay side of the account shows this disposable income is largely used for final consumption expenditure and the balance is the nation's saving. The National Income and Outlay Account is a consolidation of the sector income and outlay accounts.

The *National Capital Account* is a consolidation of the sector capital accounts. It shows on the receipts side depreciation allowances transferred from the Domestic Production Account and saving transferred from the National Income and Outlay Account (or from the sector income and outlay accounts). On the payments side are shown purchases by all sectors of new buildings and capital equipment, the increase in stocks of all sectors and a balance described as net lending to overseas. This concept of net lending to overseas includes the increases (and, negatively, decreases) in Australia's overseas monetary reserves. The net lending to overseas is also the balance on the current transactions in the Overseas Transactions Account.

The *Overseas Transactions Account* records all transactions of a current nature between Australian and overseas residents. Although this is an account for the Overseas Sector, the items are named from the Australian viewpoint. The account shows that Australia's current receipts from overseas consist of the value of (Australia's) exports of goods and services, property income received from overseas and transfers from overseas. These receipts are used for (Australia's) imports of goods and services and payments of property income and transfers to overseas; and the balance of current receipts represents net lending to overseas. Positive net lending to overseas corresponds to a surplus on current transactions with overseas and negative net lending corresponds to a deficit.

Domestic Production Account, Australia, 1982-83

	\$m		\$m
Wages, salaries and supplements	92 102	Final consumption expenditure:	
Gross operating surplus:		Private .....	101 744
Trading enterprises;		Government .....	28 804
Companies .....	17 635	Gross fixed capital expenditure:	
Unincorporated enterprises	15 230	Private .....	24 290
Dwellings owned by persons	14 238	Public enterprises .....	7 873
Public enterprises .....	3 623	General government .....	5 506
Financial enterprises .....	4 194	Increase in stocks .....	-2 591
Less Imputed bank service charge .....	4 160	Statistical discrepancy .....	1 721
		Gross National Expenditure	167 347
Gross Domestic Product at Factor Cost .....	142 862	Exports of goods and services ...	24 498
Indirect taxes less subsidies .....	20 995		
		National turnover of goods and services .....	191 845
		Less Imports of goods and services .....	27 988
		Expenditure on Gross Domestic Product .....	163 857
Gross Domestic Product .....	163 857		

Overseas Transactions Account, Australia, 1982-83

	\$m		\$m
Exports of goods and services ...	24 498	Imports of goods and services ....	27 988
Property income from overseas	808	Property income to overseas .....	4 040
Transfers from overseas:		Transfers to overseas:	
Personal .....	922	Personal .....	600
Other .....	28	General government .....	806
Withholding Taxes .....	259	Net lending to overseas .....	-6 919
		Use of current receipts .....	26 515
Current receipts from overseas ....	26 515		

National Income and Outlay Account, Australia, 1982-83

	\$m		\$m
Final consumption expenditure:		Wages, salaries and supplements	92 102
Private .....	101 744	Net operating surplus .....	38 307
Government .....	28 804		
Saving .....	17 427	Domestic factor incomes ....	130 409
		Less Net income paid overseas	3 232
		Indirect taxes .....	22 301
		Less Subsidies .....	1 306
		National Income .....	148 172
		Less Net transfers to overseas ...	456
		Withholding taxes .....	259
Disposal of Income .....	147 975	National Disposable Income .....	147 975

## National Capital Account, Australia 1982-83

	\$m		\$m
Gross fixed capital expenditure:		Depreciation allowances .....	12 453
Private:		Saving:	
Dwellings .....	5 440	Increase in income tax provisions .....	-258
Other building and construction .....	4 823	Undistributed (company) income .....	567
All other .....	14 027	Retained income of public financial enterprises .....	366
Public enterprises .....	7 873	Household saving .....	13 971
General government .....	5 506	General government surplus on current transactions .....	2 581
Increase in stocks .....	-2 591	Extraordinary insurance claims paid .....	200
Statistical discrepancy .....	1 721		
Net lending to overseas .....	-6 919		
<b>Gross accumulation .....</b>	<b>29 880</b>	<b>Finance of gross accumulation .....</b>	<b>29 880</b>

The next three tables give details for South Australia of farm income, household income, and private final consumption expenditure for the years 1978-79 to 1982-83.

Farm Income, South Australia <sup>(a)</sup>

Particulars	1978-79	1979-80	1980-81	1981-82	1982-83
	\$ million				
Gross value of farm production:					
Wool (including skin wool) .....	162	215	246	261	259
Livestock slaughterings .....	361	396	366	391	404
Wheat .....	265	357	254	270	120
Other grain crops .....	130	205	180	182	109
Other crops .....	214	225	260	309	271
Other livestock products .....	59	69	77	80	91
Total .....	1 191	1 467	1 383	1 493	1 254
Subsidies not included in GVP ....	4	1	2	2	14
Less Stock valuation adjustments ...	22	20	-1	7	7
Less Production costs:					
Marketing costs .....	112	150	127	145	720
Seed and fodder .....	71	106	123	154	
Other costs .....	231	282	322	359	
Gross farm product at factor cost .....	759	910	814	830	541
Indirect taxes less subsidies .....	28	42	43	45	38
Gross farm product at market prices .....	787	952	857	875	579
Less Depreciation .....	87	100	122	150	399
Wages, net rent and interest paid and third party insurance transfers .....	140	159	182	222	
Indirect taxes less subsidies .....	28	42	43	45	
<b>Farm income .....</b>	<b>532</b>	<b>651</b>	<b>510</b>	<b>458</b>	<b>142</b>

(a) Includes Northern Territory.



## Household Income, South Australia

Particulars	1978-79	1979-80	1980-81	1981-82	1982-83
\$ million					
Wages, salaries and supplements ....	4 735	5 123	5 835	<i>n.y.a.</i>	<i>n.y.a.</i>
Income of farm unincorporated enterprises .....	460	573	471	422	115
Income of other unincorporated enterprises .....	490	531	555	576	559
Income from dwellings .....	295	305	319	364	458
Transfers from general government	898	966	1 111	1 301	1 558
All other income .....	738	857	1 070	1 341	1 571
<b>Total household income .....</b>	<b>7 616</b>	<b>8 355</b>	<b>9 361</b>	<b><i>n.y.a.</i></b>	<b><i>n.y.a.</i></b>
<i>Less</i>					
Income tax paid .....	1 071	1 245	1 428	1 668	<i>n.y.a.</i>
Other direct taxes, fees, fines, etc.	71	68	52	57	<i>n.y.a.</i>
Consumer debt interest .....	117	124	150	188	<i>n.y.a.</i>
Transfers overseas .....	}				
<b>Household disposable income ....</b>	<b>6 357</b>	<b>6 918</b>	<b>7 731</b>	<b><i>n.y.a.</i></b>	<b><i>n.y.a.</i></b>

Private Final Consumption Expenditure, South Australia <sup>(a)</sup>

Particulars	1978-79	1979-80	1980-81	1981-82	1982-83
\$ million					
Food .....	1 047	1 164	1 331	1 491	1 652
Cigarettes and tobacco .....	133	145	156	172	187
Alcoholic drinks .....	299	334	374	419	458
Clothing, etc. ....	466	490	550	605	658
Health .....	421	447	498	572	659
Dwelling rent .....	862	959	1 076	1 250	1 500
Gas, electricity, fuel .....	120	132	152	188	236
Household durables .....	506	532	616	689	731
Newspapers, books, etc. ....	99	103	123	138	146
All other goods n.e.i. ....	270	305	348	394	415
Travel and communication .....	834	982	1 074	1 210	1 393
All other services .....	650	710	779	864	962
<b>Total .....</b>	<b>5 707</b>	<b>6 303</b>	<b>7 077</b>	<b>7 992</b>	<b>8 997</b>

(a) Includes Northern Territory.

## Further References

Additional information may be found in the following publication:

5204.0 *Australian National Accounts—National Income and Expenditure*

## **PART 12**

# **PRIVATE FINANCE**

## **12.1 BANKING AND CURRENCY**

### **BANKING**

The banking system in Australia comprises a central bank (the Reserve Bank of Australia); eleven trading banks (one owned by the Commonwealth Government, three by State Governments, and seven privately owned); the Commonwealth Development Bank and the Australian Resources Development Bank Limited (specialist banks, owned respectively by the Commonwealth Government and a consortium of the four major trading banks), the Primary Industry Bank of Australia Limited, and ten savings banks of which one is owned by the Commonwealth Government and two by State Governments, five are trustee savings banks, and four are associated with privately owned trading banks.

### **LEGISLATION**

Under Section 51 of the Constitution Act the Commonwealth Parliament has power to legislate with respect to 'Banking, other than State banking; also State banking extending beyond the limits of the State concerned, the incorporation of banks, and the issue of paper money'.

The principal Acts at present in force relating to banking are:

- (a) the *Reserve Bank Act 1959*, providing for the constitution and management of the Reserve Bank and the management of the Australian note issue;

(b) the *Commonwealth Banks Act 1959*, providing for the constitution and management of the Commonwealth Banking Corporation; and

(c) the *Banking Act 1959*, providing for the regulation of banking and the protection of the currency and public credit of Australia.

The *Banking Act 1959* applies to all banks operating in Australia or its Territories, except State banks trading in their own State. The objects of the Act are: (1) to provide a uniform legal framework for regulating the banking system; (2) to safeguard depositors from loss; (3) to provide for the co-ordination of banking policy under the direction of the Reserve Bank; (4) to control bank interest rates and the volume of credit in circulation; (5) to provide machinery for the control of foreign exchange.

State banking legislation relates to the incorporation of banks and the constitution and management of State banks. The State Bank Act, 1925-1983 and the Savings Bank of South Australia Act, 1929-1983 were repealed upon the amalgamation of those two bodies into the State Bank of South Australia, which occurred on 1 July 1984.

### RESERVE BANK OF AUSTRALIA

The Reserve Bank of Australia functions as a central bank, controls the Australian note issue through the Note Issue Department, provides special banking facilities through the Rural Credits Department, and acts as banker to the Commonwealth and some of the States. Liabilities and assets of each department of the Reserve Bank, taken from their Reports and Financial Statements, are shown in the table below.

**Reserve Bank of Australia, Liabilities and Assets at 30 June 1983**

Particulars	Central Bank Depart- ment	Note Issue Depart- ment	Rural Credits Depart- ment	Total (a)
<b>LIABILITIES (\$'000)</b>				
Capital .....	40 000	—	9 428	49 428
Reserves .....	1 720 488	2 395 951	99 681	4 216 120
Special Reserve:				
International Monetary Fund				
Special Drawing Rights .....	304 547	—	—	304 547
Notes on issue .....	—	7 236 792	—	7 236 792
Deposits:				
Statutory reserve deposits ...	2 409 053	—	—	2 409 053
Other trading banks deposits	12 648	—	—	12 648
Savings bank deposits .....	1 310	—	—	1 310
Other deposits .....	7 514 693	—	8 827	(a) 2 089 205
Other liabilities .....	511 175	51 308	245 067	(a) 569 067
<b>Total .....</b>	<b>12 513 914</b>	<b>9 684 051</b>	<b>363 003</b>	<b>(a) 16 888 170</b>
<b>ASSETS (\$'000)</b>				
Gold and foreign exchange (b) ...	9 964 781	2 296 333	—	12 261 114
Australian Government securities .....	1 042 183	1 829 284	—	2 871 467
Other assets .....	1 506 950	5 558 434	363 003	(a) 1 755 589
<b>Total .....</b>	<b>12 513 914</b>	<b>9 684 051</b>	<b>363 003</b>	<b>(a) 16 888 170</b>

(a) Inter-departmental accounts totalling \$5 672 798 000 have been offset in totals.

(b) Includes IMF Special Drawing Rights.

The policy of the Reserve Bank is determined by a Board consisting of the Governor of the Reserve Bank (Chairman), the Deputy Governor, the Secretary to the Treasury, and seven other members appointed by the Governor-General. The Bank is managed by the Governor, who acts in accordance with the policy of the Board and with any directions of the Board. The Bank is required to inform the Government of the monetary and banking policy of the Board. In the event of a disagreement between the Government and the Board as to whether the monetary and banking policy of the Bank is directed to the greatest advantage of the people of Australia, the Governor-General, acting with the advice of the Executive Council, may determine the policy to be adopted by the Bank.

Further details of the activities of the Reserve Bank are given in the *Year Book Australia*.

### COMMONWEALTH BANKING CORPORATION

The Commonwealth Banking Corporation was established under the *Commonwealth Banks Act 1959* and commenced operations on 14 January 1960. It is the controlling body for the Commonwealth Trading Bank, the Commonwealth Savings Bank and the Commonwealth Development Bank.

Particulars relating to the Development Bank are given below, while details of the other two banks are included in later sections relating to trading banks and savings banks.

#### Commonwealth Development Bank

The Commonwealth Development Bank is a supplementary source of finance for primary production and for the establishment or development of industrial undertakings and does not compete with conventional lenders, but provides financial help when such help is thought desirable and finance is not otherwise available on suitable terms. The primary consideration of the Bank's operations in deciding whether finance should be made available is the prospect of success and not necessarily the value of security available.

In South Australia all the major private banks and the State Bank of South Australia are agents of the Commonwealth Development Bank for the receipt of loan applications. The averages of weekly figures for loans, advances and bills discounted for the month of June in the years 1981 to 1984 were \$562, \$605, \$721 and \$833 million respectively. Of the last mentioned amount, \$98 million was advanced in South Australia.

At 30 June 1984 the capital of the Commonwealth Development Bank was \$61.7 million.

### AUSTRALIAN RESOURCES DEVELOPMENT BANK LIMITED

This corporation was formed by the major trading banks with the support of the Reserve Bank and was given bank status by an amendment to the Banking Act in 1967. It provides finance for the development of Australia's natural resources mainly in the form of refinanced trading bank loans but also by direct lending and equity participation. Other services offered to intending developers include the organising of consortia financing, assessments of feasibility and independent verification of reserves. The averages of weekly figures for loans and advances outstanding (including refinanced loans) for the month of June in the years 1981 to 1984 were \$723, \$785, \$868 and \$903 million respectively. This finance is provided from the Australian capital market (mainly in the form of public issues of transferable deposits) and from subordinated loans by the shareholding banks and the Reserve Bank of Australia. Overseas borrowing remains a minor source of funds.

Authorised capital of the Bank is \$20 million of which \$11 million had been issued as fully paid capital at 30 September 1983. The shareholders (the major trading banks) have approximately equal shareholdings. Although not a shareholder, the Reserve Bank of Australia initially subscribed \$2·1 million in loan capital on which interest is paid.

#### THE PRIMARY INDUSTRY BANK OF AUSTRALIA LIMITED

The Primary Industry Bank of Australia Limited commenced operations on 22 September 1978 under the authority of the *Primary Industry Bank Act 1977*. The Bank has also been brought within the scope of the *Banking Act 1959* including those provisions relating to the protection of depositors, advances policy, control of interest rates, furnishing of statistics, and alterations in the structure and ownership of the Bank.

The main objective of the Bank is to facilitate the provision of loans to primary producers for longer terms than are otherwise generally available. The Bank's role is restricted to refinancing loans made by banks and other financial institutions with terms of eight years or more but not exceeding thirty years.

The initial equity capital of the Bank is \$5 625 000 consisting of eight shares. Seven shares are held by the Commonwealth of Australia and major trading banks while the eighth share is held equally by the four State banks.

#### TRADING BANKS

For statistical purposes trading banks are often divided into two groups, 'major' and 'other'. Due to two mergers in 1982-83 (*see* page 534) there are now only three major private bank groups operating in Australia, and together with the Commonwealth Trading Bank they represent the 'major trading banks'. At June 1983 the major trading banks held approximately 88 per cent of all general trading bank assets in Australia.

The group 'other trading banks' consists of the three State Government banks (including the State Bank of South Australia) which trade mainly in their respective States, and four other banks (two of them overseas institutions) whose business is either specialised (*e.g.* financing overseas trade), or both specialised and limited to particular areas.

#### **Banks Originating in South Australia**

With a subscribed capital of \$500 000 in 50 000 shares of \$10 each, the first trading bank promoted in South Australia was The Bank of Adelaide which was opened for business on 11 December 1865. The Australia and New Zealand Banking Group Ltd effectively took over the operations of The Bank of Adelaide from 1 October 1980.

Pursuant to the State Advances Act of 1895 the State Bank of South Australia commenced business in 1896. The original Act directed that advances were to be made on first mortgage to farmers, other primary producers and local government authorities. The State Bank Act, 1925 repealed the State Advances Act, and enlarged the scope of the activities of the Bank by making provision for loans on overdraft and all business of general banking. The State Bank also administers the following Acts on behalf of the State:

- Advances to Settlers Act, 1930-1972;
- Loans to Producers Act, 1927-1980;
- Loans for Fencing and Water Piping Act, 1938-1975;
- Student Hostels (Advances) Act, 1961;

and the Commonwealth/State Housing Agreement-Home Builders Fund.

Following the merger of The Savings Bank of South Australia and the State Bank of South Australia, the new State Bank of South Australia came into being on 1 July 1984.

**Assets**

Under the provisions of the *Banking Act 1959* all trading banks (except State banks trading in their own State) have limitations on their portfolio of assets. These banks are required to maintain a fixed percentage of total deposits as a Statutory Reserve Deposit (SRD) with the Reserve Bank. The SRD ratio which had been 6 per cent from 6 December 1979, changed to 7 per cent from 6 January 1981.

The major trading banks are also required by agreement to hold a certain percentage of total deposits in the form of liquid assets or government securities. This minimum LGS ratio which had remained at 18 per cent from 1962 was changed temporarily to 23 per cent in February 1976 but reverted to 18 per cent on 1 April 1977.

The following table gives some particulars of assets held by trading banks in Australia. The figures are averages of assets at the close of business on each Wednesday in June 1984.

**Trading Banks: Assets Within Australia, June 1984 <sup>(a)</sup>**

Assets	Major Trading Banks	Other Trading Banks	All Trading Banks
		\$'000	
Gold, bullion and Australian notes .....	617 912	52 819	670 732
Cash with Reserve Bank .....	5 419	1 770	7 189
Commonwealth public securities:			
Commonwealth Government and State .....	5 666 782	732 121	6 398 903
Local authorities and public corporations ....	41 252	54 718	95 970
Statutory Reserve Deposit Account with Reserve Bank .....	2 360 262	48 951	2 409 214
Loans to authorised dealers in short-term money market .....	136 228	183 740	319 968
Other loans, advances and bills discounted .....	26 443 728	5 306 999	31 750 727
Bank premises, furniture and sites .....	18 305 024	2 668 779	20 973 804
<b>Total assets .....</b>	<b>53 576 607</b>	<b>9 049 897</b>	<b>62 626 504</b>

(a) Excludes inter-branch accounts and contingencies.

**Branches and Agencies**

Of the eleven trading banks which operate in Australia, the seven banks listed below conduct business in South Australia:

**Government banks;**

Commonwealth Trading Bank of Australia

State Bank of South Australia

**Private banks;**

Australia and New Zealand Banking Group Limited

Westpac Banking Corporation From 1 October 1982 the Bank of New South Wales joined with the Commercial Bank of Australia Ltd to form the Westpac Banking Corporation.

National Australia Bank Limited From 4 January 1983 the National Bank of Australasia Ltd merged with the Commercial Banking Company of Sydney Ltd to form the National Commercial Banking Corporation of Australia Ltd, now National Australia Bank Ltd.

Bank of New Zealand

Banque Nationale de Paris

## Trading Banks: Branches and Agencies at 30 June, South Australia

Bank	Branches			Agencies		
	1982	1983	1984	1982	1983	1984
Commonwealth Trading Bank .....	77	78	77	27	26	26
State Bank of South Australia .....	44	44	40	16	17	17
Private banks .....	334	326	317	85	88	87
Total—Metropolitan area (a) .....	264	261	250	44	45	47
Country .....	191	187	184	84	86	83
Total State .....	455	448	434	128	131	130

(a) As determined by individual banks for administrative purposes.

## Deposits, Advances and Debits to Customers Accounts

Deposits not bearing interest are on current account and may be withdrawn on demand. Deposits bearing interest include some deposits on current account but most are deposits for fixed terms ranging from three months to four years and for large amounts from thirty days to four years.

Debits to customers accounts generally represent the total of all cheques drawn by customers of the banks.

Trading Banks: Balance of Deposits and Advances and Debits to Customers Accounts  
South Australia <sup>(a)</sup>

Year	Depositors Balances			Loans, Advances, and Bills Discounted (b)	Debits to Customer Accounts (c)	Proportion to Total Deposits	
	Bearing Interest	Not Bearing Interest	Total			Deposits Bearing Interest	Loans, Advances, and Bills Discounted (b)
			\$'000				Per cent
1979 .....	944 182	492 777	1 436 958	1 727 818	924 668	65.7	120.2
1980 .....	1 105 581	546 384	1 651 965	1 938 230	1 021 644	66.9	117.3
1981 .....	1 232 520	580 923	1 813 443	2 148 545	1 169 767	68.0	118.5
1982 .....	1 329 021	571 649	1 900 670	2 390 441	1 700 281	69.9	125.8
1983 .....	1 338 793	594 055	1 932 848	2 561 840	1 727 711	69.2	132.5
1984 .....	1 316 794	660 079	1 976 873	2 839 846	2 123 958	66.6	143.7

(a) Average of weekly figures for month of June.

(b) Excludes loans to authorised dealers in the short-term money market.

(c) Includes the Rural Credits Department of the Reserve Bank and the Commonwealth Development Bank.

The following table relates to trading bank advances outstanding for all banks in South Australia and the Northern Territory except the State Bank of South Australia, the Banque Nationale de Paris and the Bank of New Zealand. Advances are classified according to type of borrower in July of each year from 1980 to 1983.

**Major Trading Banks, South Australia and Northern Territory**  
**Advances to Resident Borrowers by Type of Borrower <sup>(a)</sup>**  
**(At Second Wednesday in July)**

Classification	1980	1981(b)	1982	1983(c)
\$ million				
Business advances:				
Agriculture, grazing and dairying (d) .....	250.7	303.7	334.6	371.8
Manufacturing .....	126.0	130.6	161.3	182.8
Transport, storage and communication .....	22.5	33.2	40.0	28.9
Finance .....	46.8	53.7	56.4	55.7
Commerce;				
Retail trade .....	119.3	127.4	128.0	128.6
Wholesale trade (e) .....	50.4	52.4	64.1	55.0
Total commerce .....	169.7	179.7	192.1	183.6
Building and construction .....	47.9	49.0	51.6	49.3
Other business .....	185.8	182.8	197.2	170.8
Unclassified .....	19.3	19.1	63.5	60.8
Total business advances ...	868.6	951.8	1 096.6	1 103.8
Distribution of business advances:				
To companies .....	425.2	452.2	527.2	499.6
Other .....	443.4	499.6	569.4	604.2
Advances to public authorities .....	3.1	2.7	4.7	3.0
Personal advances:				
Building or purchasing own home .....	80.3	82.0	69.8	44.9
Other .....	521.4	552.1	619.1	623.3
Total personal advances ...	601.7	634.1	688.8	668.2
Advances to non-profit organisations .....	12.0	13.9	14.3	13.1
Total advances to resident borrowers .....	1 485.3	1 602.5	1 804.4	1 788.1

(a) Covers advances by the Commonwealth Trading Bank and all private trading banks, but excludes advances by the State Bank of South Australia, the Banque Nationale de Paris and the Bank of New Zealand. 'Resident borrowers' comprise all institutions (including branches of overseas institutions) engaged in business in Australia and individuals permanently residing in Australia.

(b) From July 1981 figures not strictly comparable with previous periods because of a change in accounting procedures.

(c) Excludes Northern Territory.

(d) Includes farm development loan component.

(e) Includes temporary advances to woolbuyers.

### Interest Rates

Bank interest rates are not formally determined under the Banking Act. Maximum rates are fixed after discussions between the Reserve Bank and the banks, and with the approval of the Treasurer. State Government banks, although not bound by rulings of the Reserve Bank, tend to conform to them.



## SAVINGS BANKS

## Development of Savings Banks

The prime object of the foundation of savings banks in Australia was the encouragement of thrift. Generally, depositors cannot operate on their savings accounts by means of cheques, although most savings banks extend this facility to non-profit organisations such as friendly, co-operative and charitable societies. Savings accounts have the advantages that deposits may be withdrawn on demand and that depositors receive interest on their minimum monthly balances. No charge is made by the banks for keeping these accounts or the cheque accounts of some non-profit organisations. However, early in 1970 concessions relating to charges and interest on trading accounts were withdrawn from hospital and medical benefit organisations, building societies, credit unions and investment clubs.

Post Offices in South Australia acted as agencies for the Savings Bank of South Australia until 1912 when they became agents of the Commonwealth Bank.

Savings bank business was conducted exclusively by these two government banks until 1956, when the first of the private banks entered this field. Savings bank facilities in South Australia are now provided by the six banks listed below:

## Government;

Commonwealth Savings Bank of Australia

Savings Bank of South Australia (Merged with the State Bank of South Australia on 1 July 1984)

## Private;

Australia and New Zealand Savings Bank Limited

Westpac Banking Corporation Savings Bank Limited

National Australia Savings Bank Limited

The Bank of New Zealand Savings Bank Limited

## Savings Bank of South Australia

The Savings Bank of South Australia commenced operations on 11 March 1848 following the enactment of an ordinance in 1847. At 30 June 1984 there were 158 branches, 790 agencies and 563 school bank agencies within South Australia. The Savings Bank of South Australia has agent banks to act for it in other Australian States and has conducted its own office in Pall Mall, London, since September 1975.

The total of depositors balances at 30 June 1984 amounted to more than \$1 541 million.

## Savings Bank of South Australia, Summary of Business

Year	Operative Accounts	Cash Turnover (a)	Depositors Balances (b)	Loans (b) (c)	Government Securities Held (b) (d)
	No.	\$m		\$'000	
1980-81 .....	1 096 445	9 076	1 206 547	874 869	156 365
1981-82 .....	1 096 647	11 104	1 284 452	950 434	141 032
1982-83 .....	1 092 690	14 189 (e)	1 430 300	1 031 690	139 876
1983-84 .....	1 075 915	21 549	1 541 424	1 124 407	172 932

(a) Sum of deposits and withdrawals; includes some duplication from amounts transferred by depositors from one type of account to another. (b) At end of year, as published in the Bank's Annual Report. (c) Includes loans guaranteed by South Australian Government and to statutory and local government bodies. (d) Commonwealth Government Securities only. (e) Includes interest accrued to 30 June.

### Branches and Agencies

The number of branches of savings banks increased considerably during the period 1961-1970, due mainly to the increase in branches of private banks in the metropolitan area. However since 1978 there has been a decline in the number of branches of private savings banks from 360 to 325. The number of agencies of savings banks has decreased each year since 1968.

#### Savings Banks: Branches and Agencies at 30 June, South Australia

Bank	Branches			Agencies		
	1982	1983	1984	1982	1983	1984
Commonwealth Savings Bank ....	85	85	85	589	575	558
Savings Bank of South Australia	158	158	158	612	605	563
Private banks .....	342	325	316	357	300	248
Total—Metropolitan area (a)	585	568	559	1 558	1 480	1 369
Country .....	228	222	222	621	559	553
Total State .....	585	568	559	1 558	1 480	1 369

(a) As determined by individual banks for administrative purposes.

### School Banking

Special banking facilities for school children were introduced into South Australia with the inauguration of the School Banking Department of the Savings Bank of South Australia on 28 April 1908. The Commonwealth Savings Bank of Australia and some private banks provide similar services at some private schools. However, the Savings Bank of South Australia has sole access to State schools, and retains a major share of school banking business. With a view to encouraging savings by school children, deposits as small as fifty cents are accepted. The following table shows details of school banking for South Australia at 30 June for the years 1981 to 1984.

#### School Banking, South Australia

At 30 June	Agencies	Operative Accounts	Depositors Balances
	No.	'000	\$'000
1981 .....	887	131	5 045
1982 .....	889	125	5 006
1983 .....	889	123	4 926
1984 .....	782	127	5 877

### Assets

Under the provisions of the *Banking Act 1959* all savings banks (except State banks trading in their own State) are required to maintain in prescribed investments an amount that together with cash on hand in Australia is not less than the amount on deposit in Australia with the savings bank. These prescribed investments include deposits with the Reserve Bank, deposits with or loans to other banks, Commonwealth Government or State securities, loans for housing, loans to authorised dealers in the short-term money market and loans to the Australian Banks Export Refinance Corporation Ltd.

A further limitation on the portfolio of assets held by savings banks is that they are required to hold in cash, deposits with the Reserve Bank, and Commonwealth Government Securities, funds equivalent to 15 per cent of depositors balances. This limitation was imposed by an amendment to the Banking (Savings Bank) Regulations in 1982.

### Deposits

The total of depositors balances in savings banks per head of population has for this State been consistently well above the Australian average.

The following table shows details of savings banks accounts and deposits for South Australia and Australia at 30 June for the years 1982 to 1984.

**Savings Banks: Accounts and Deposits, South Australia and Australia**

At 30 June	South Australia			Australia		
	Operative Accounts	Depositors Balances	Deposits per Head of Population	Operative Accounts (a)	Depositors Balances	Deposits per Head of Population
	(a)			(a)		
	'000	\$m	\$	'000	\$m	\$
1982 .....	2 233	2 595·8	1 953	23 199	25 047·0	1 658
1983 .....	2 258	3 012·3	2 247	23 863	30 039·9	1 966
1984 .....	2 306	3 367·6	2 338	24 220	34 368·9	2 205

(a) Excludes school bank and inoperative accounts.

The next table gives an indication of the amount of business conducted by savings banks during each of the last three years.

**Movements in Savings Bank Deposits, South Australia**

Year	Amount on Deposit at Beginning of Year	Deposits during Year (a)	Withdrawals during Year (a)	Interest Added during Year	Increase in Depositors Balances during Year	Amount on Deposit at End of Year
				\$million		
1981-82 .....	2 457·1	9 493·8	9 549·8	194·6	138·7	2 595·8
1982-83 .....	2 595·8	11 766·4	11 581·3	231·4	416·5	3 012·3
1983-84 .....	3 012·3	15 814·2	15 721·7	262·8	355·3	3 367·6

(a) Includes inter-branch transfers.

**Savings Bank Deposits, South Australia**

At 30 June	Commonwealth Savings Bank	Savings Bank of South Australia	Private Savings Banks	Total
				\$ million
1982 .....	582·2	1 284·5	729·1	2 595·8
1983 .....	693·2	(a) 1 430·3	888·8	3 012·3
1984 .....	769·8	1 541·4	1 056·3	3 367·6

(a) Includes interest accrued to 30 June.

The Savings Bank of South Australia has always held a very high proportion of the total of depositors balances in this State, although its share of total on deposit has dropped from about 75 per cent in 1961 to approximately 45 per cent in 1984. During that time the private banks have increased their share from less than 12 per cent to approximately 32 per cent.

### CURRENCY

Under the Commonwealth Constitution the control of currency, coinage and legal tender in Australia is vested in the Commonwealth.

The Commonwealth Treasurer is empowered by legislation to arrange for the making and issuing of coins of specified denominations. Australia's coin requirements are met by the Royal Australian Mint in Canberra. Australian notes are printed by the Note Printing Branch of the Reserve Bank in Melbourne, while their issue is controlled by the Note Issue Department of that bank. Notes in circulation are of the denominations \$1, \$2, \$5, \$10, \$20, \$50 and \$100. Coins in circulation are 1 cent and 2 cent (bronze) and 5, 10, 20, 50 cents (cupro-nickel), and \$1.

#### Notes in Circulation, Australia

Denomination	Last Wednesday in June				
	1980	1981	1982	1983	1984
	\$ million				
\$1 .....	68.6	74.1	78.8	81.4	58.2
\$2 .....	145.1	152.7	158.4	162.9	168.6
\$5 .....	143.2	153.9	165.6	174.1	183.1
\$10 .....	567.6	555.9	546.7	531.5	512.9
\$20 .....	1 903.9	2 060.0	2 169.8	2 195.8	2 235.6
\$50 .....	1 757.8	2 190.7	2 718.2	3 216.4	3 450.4
\$100 .....	—	—	—	—	595.6
Total .....	4 586.1	5 187.3	5 837.5	6 362.2	7 204.5
Notes held by:					
Banks .....	500.9	578.1	677.4	712.6	786.7
Public .....	4 085.2	4 609.2	5 160.1	5 649.6	6 417.8

Minting of the 50 cent coin in its original form of 80 per cent silver and 20 per cent copper, ceased in April 1968. A twelve-sided version of the 50 cent coin, in cupro-nickel, was issued in September 1969. Special 50 cent coins were issued in 1970 to commemorate the two-hundredth anniversary of Captain James Cook's discovery of the east coast of Australia, in 1977 to commemorate the twenty-fifth anniversary of Queen Elizabeth's accession to the throne, in 1981 to commemorate the marriage of Prince Charles to the Lady Diana Spencer, and in 1982 to record the Commonwealth Games in Brisbane.

More complete details of Australian currency, including historical references, were included on pages 552-6 of the *South Australian Year Book* 1968.

## 12.2 INSURANCE

### GENERAL INSURANCE

General insurance in South Australia is conducted by private organisations and the State Government Insurance Commission which commenced business in January 1972. Some Government insurance, in particular workers compensation, is carried by the Government Insurance Fund which is administered by the Government Insurance Office. In addition, the State Bank of South Australia insures certain properties on which it has provided mortgage finance.

Companies, persons or firms of persons carrying on general insurance business are required under the Stamp Duties Act, 1923-1983 to take out an annual licence, such licence being the authority to carry on insurance business in the State. The licence fee varies with premium income. Under the Fire Brigades Act, 1936-1981 insurance companies contribute approximately 75 per cent of the cost of maintaining the services of the Fire Brigades Board.

Insurance for workers compensation and motor vehicle third party risks is compulsory under State legislation. Employers, unless specifically exempted, are required under the Workers Compensation Act, 1971-1983 to effect an insurance cover providing compensation for workers suffering injuries in the course of their employment. Details of workers compensation provisions are given in Part 7.4.

Under the Motor Vehicles Act, 1959-1985 all vehicles other than those belonging to the Crown must be covered by a third party policy protecting the owner against any liability for death or injury to others resulting from use of the vehicle. Particulars are given in Part 10.4.

Legislation affecting all insurance companies operating in Australia is embodied in the *Insurance Act 1973* which seeks to ensure the continued financial stability of these companies. This Act is concerned only with the solvency of all companies engaged in insurance business and not with contractual arrangements between policy holders and insurers or with the rate of premiums charged. It also provides for the continuation of the provisions of the State Acts referred to above.

The statistics in this section are compiled from returns covering transactions of the State Government Insurance Commission, the Government Insurance Fund, State Bank and companies and company groups licensed to conduct general insurance business. Each return gives details of the organisation's activities during a twelve-month period ending within the year shown. Some re-insurance transactions are excluded from the returns to avoid duplication.

The following tables show details of claims and premiums relating to general insurance undertaken by authorised insurers and government instrumentalities for the years 1980-81 to 1982-83. The first table shows details of claims which comprise payments made during the year, plus the estimated amount of outstanding claims at the end of the year, less the estimated amount of outstanding claims at the beginning of the year.

**General Insurance: Claims, South Australia**

Class of Business	1980-81	1981-82	1982-83
		\$'000	
Fire (including sprinkler leakage) .....	15 486	13 432	23 055
Loss of profits .....	310	627	1 631
Crop (including hailstone) .....	678	1 149	261

## General Insurance: Claims, South Australia (continued)

Class of Business	1980-81	1981-82	1982-83
		\$'000	
Houseowners and householders .....	22 832	20 096	31 623
Contractors risks .....	685	740	1 506
Marine hull:			
Private pleasure craft .....	661	853	631
Other .....	1 788	2 477	811
Marine cargo .....	4 484	4 650	3 423
Aviation hull/cargo .....	5	(a)	(a)
Motor vehicle (including motor cycles) .....	49 124	53 620	55 897
Compulsory third party (motor vehicles) .....	108 742	115 456	143 059
Employers liability .....	59 671	87 272	105 755
Public liability .....	5 320	6 767	10 336
Product liability .....	301	564	588
Professional indemnity .....	357	913	789
Loan, mortgage and lease .....	416	(a)	(a)
Burglary .....	2 412	2 393	2 342
Travel (including baggage) .....	1 894	1 503	1 408
Boiler/engineering/machinery breakdown .....	1 791	2 271	2 647
Plate glass .....	868	911	915
Guarantee .....	46	72	90
Livestock .....	345	432	586
Personal accident .....	4 347	4 766	4 292
Other .....	5 050	5 122	5 617
Total (b) .....	287 613	326 086	397 262

(a), (b) See footnotes under 'Premiums' table.

The next table shows premiums earned by the insurers. Premiums represent the full amount receivable in respect of policies issued and renewed in the year less returns, rebates, and bonuses, paid or credited to policy holders in the year. They are not adjusted to provide for premiums unearned at the end of the year and consequently the amounts shown differ from 'earned premium income' for the year.

## General Insurance: Premiums, South Australia

Class of Business	1980-81	1981-82	1982-83
		\$'000	
Fire (including sprinkler leakage) .....	19 749	20 200	22 438
Loss of profits .....	2 091	2 569	2 253
Crop (including hailstone) .....	2 852	2 619	1 291
Houseowners and householders .....	31 805	36 822	43 157
Contractors risks .....	1 068	1 973	2 065
Marine hull:			
Private pleasure craft .....	1 086	1 271	1 382
Other .....	1 399	1 679	1 390
Marine cargo .....	6 607	7 011	6 359
Aviation hull/cargo .....	46	(a)	(a)
Motor vehicle (including motor cycles) .....	65 548	70 316	86 402
Compulsory third party (motor vehicles) .....	74 806	89 170	94 012

**General Insurance: Premiums, South Australia (continued)**

Class of Business	1980-81	1981-82	1982-83
		\$'000	
Employers liability .....	64 046	78 955	119 062
Public liability .....	6 871	8 285	10 714
Product liability .....	433	459	674
Professional indemnity .....	821	892	648
Loan, mortgage and lease .....	428	(a)	(a)
Burglary .....	2 547	2 895	3 538
Travel (including baggage) .....	(b) 2 529	(b) 3 056	2 849
Boiler/engineering/machinery breakdown .....	3 516	3 939	4 887
Plate glass .....	1 013	1 197	1 408
Guarantee .....	324	327	422
Livestock .....	630	585	977
Personal accident .....	7 219	7 784	7 879
Other .....	(b) 10 019	(b) 12 428	14 888
Total (b) .....	307 453	354 432	428 695

(a) Included in 'other'.

(b) The data series on premiums and claims exclude details for brokers. However, premiums, classified by class of business are presented at the Australian level for brokers (refer *General Insurance—Australia* (Catalogue No. 5620.0)).**Further References**

Additional information may be found in the following publication:

5620.0      *General Insurance—Australia***12.3 OTHER PRIVATE FINANCE****STOCK EXCHANGE OF ADELAIDE LIMITED**

The Stock Exchange of Adelaide was formed in 1887 by the amalgamation of the Adelaide Stock Exchange and the Stock Exchange of South Australia.

The Exchange operates under a set of rules which govern both the behaviour of companies, through the various listing requirements, and the conduct of members. Management is by a chairman, a vice-chairman and a committee of four, elected by the members.

Lists of quotations are issued by the Exchange twice daily and lists of dividends and new issues are produced weekly. Transfer marking and noting services are available to members of the Exchange and to the public through solicitors and accountants. A visitors gallery overlooking the trading floor enables the proceedings to be observed.

On 2 January 1972, the Member Exchanges of the Australian Associated Stock Exchanges (which includes Adelaide) adopted the policy of 'national listing'. This common listing meant that, at 30 June 1984, the Stock Exchange of Adelaide Limited had 960 companies on its Official List with a total equity market capitalisation (i.e. total market value of ordinary shares) of \$59 834 million. The face value of other listed securities at 30 June 1984 was Commonwealth Government loans \$29 245 million, public corporation loans \$7 917 million, debentures \$2 389 million and unsecured notes \$942 million.

## Stock Exchange of Adelaide, Recorded Turnover of Securities

Particulars	Year Ended 30 June				
	1980	1981	1982	1983	1984
TRANSACTIONS ('000)					
Shares, Commonwealth Government loans, public corporation loans, debentures and unsecured notes	87	87	58	91	92
NUMBER OF SHARES ('000)					
Shares:					
Industrial .....	40 677	63 774	37 823	43 732	68 033
Mining and oil .....	66 675	69 156	36 523	62 929	94 895
Total shares .....	107 352	132 930	74 346	106 661	162 928
MARKET VALUE (\$'000)					
Shares:					
Industrial .....	63 502	113 727	70 648	65 083	140 762
Mining and oil .....	61 440	63 405	34 736	29 456	47 823
Total shares .....	124 942	177 132	105 384	94 539	188 585
\$'000					
Commonwealth Government loans, public corporation loans, debentures and unsecured notes:					
Market value .....	3 646	2 390	3 929	8 744	34 566

The figures in the table above have been supplied by the Stock Exchange.

It should be noted that several companies with diverse activities, including extensive oil and/or mining interests, are classified by stock exchanges as 'industrial' and are shown in that category in the table.

## BUILDING SOCIETIES

The operations of building societies in South Australia are regulated by the Building Societies Act, 1975-1984 which is administered by the Registrar of Building Societies. The societies fall into two categories—permanent societies and Starr-Bowkett societies. Statistics in South Australia are available only for permanent building societies.

A permanent building society is an organisation that is registered with the Registrar of Building Societies; has not by its rules any fixed date or certain event or result when it is to terminate; is authorised to accept money on deposit; and operates on a co-operative basis by borrowing predominantly from its members and providing finance to its members principally in the form of housing loans. Detailed statistics on the operations generally of permanent building societies are available in the monthly bulletin *Permanent Building Societies: Housing Finance for Owner Occupation* (Catalogue No. 5610.0) and the annual bulletin *Permanent Building Societies: Assets, Liabilities, Income and Expenditure* (Catalogue No. 5632.0).



The statistics below summarise information collected from the nine permanent building societies balancing within the 1982-83 and 1983-84 financial years.

**Permanent Building Societies: Liabilities and Assets, South Australia <sup>(a)</sup>**

Liabilities	1982-83	1983-84	Assets	1982-83	1983-84
	\$'000			\$'000	
Share capital and reserves:			Amount owing on loans .....	589 744	776 086
Withdrawable shares .....	660 091	806 632	Cash on hand .....	3 383	3 231
Reserves:			Deposits with:		
Statutory .....	4 074	6 040	Banks .....	35 368	33 320
Other <sup>(b)</sup> .....	12 531	16 334	Other .....	32 362	38 390
Deposits .....	253 217	409 744	Bills, bonds and other securities	253 081	354 890
Loans .....	17 773	18 362	Accounts receivable .....	7 369	11 132
Provisions .....	4 349	7 076	Other financial assets .....	1 987	1 924
Accounts payable .....	7 669	7 953	Physical assets .....	36 410	53 168
Total liabilities .....	959 704	1 272 141	Total assets .....	959 704	1 272 141

(a) At the balance dates of societies within the financial year shown.

(b) Includes accumulated surplus, general, capital and other reserves.

**Permanent Building Societies: Income and Expenditure, South Australia**

Expenditure	1982-83	1983-84	Income	1982-83	1983-84
	\$'000			\$'000	
Interest on:			Interest from:		
Shares .....	72 542	75 344	Loans .....	81 134	89 536
Deposits .....	25 717	40 809	Deposits .....	13 043	9 283
Loans .....	534	615	Income from holdings of securities	25 644	44 901
Wages and salaries .....	9 497	11 495	Other income .....	4 153	8 618
Administrative expenses <sup>(a)</sup> .....	7 536	9 816	Total income .....	123 974	152 338
Other expenses .....	5 341	6 940			
Total expenditure .....	121 167	145 019			

(a) Includes director's fees, auditing and accounting fees, bank charges, rent and lease payments, and other administrative expenses.

**STATUTORY TRUSTEE COMPANIES**

In 1880 a Trust and Agency Company was incorporated in South Australia. Five years later, a special Act of the Parliament of South Australia enabled it to also act as executor of deceased estates.

Since that date three other companies have been enabled, by Acts of Parliament, to enter this specialised field.

These four companies are the only independent incorporated bodies authorised to administer estates of deceased persons in South Australia.

In addition they offer a complete range of fiduciary services to persons during their lifetime including asset and investment management and supervision, taxation services, retirement planning, pastoral and property management, trustees of family trusts, charitable trusts and foundations. They may also act as trustee for the holders of debentures and notes on issue to the public. Companies act as trustees for holders in Cash Management, Property and other Unit Trusts.

All the companies have established Common Funds to permit the blending of trust funds into a common investment pool. This allows for better investment of small estates.

## Statutory Trustee Companies, South Australia

Particulars	1982	1983	1984
		\$ million	
Stock and debentures .....	54.1	60.2	55.5
Advances on mortgages .....	99.3	98.8	54.1
Real estate, farms etc. ....	67.3	66.7	67.2
Shares .....	76.5	77.4	77.3
Deposits, cash, etc. ....	48.4	56.5	46.2
Unit trusts, superannuation funds, etc. ....	4.5	0.6	9.8
Other .....	18.4	17.2	56.1
Total .....	368.5	377.4	366.2

The values shown in the table are probate values or values of assets at the time the assets came under the control of the trustee companies. In addition to those trust funds, the companies were responsible for debenture and note holders of approximately \$800 million.

## CO-OPERATIVE CREDIT SOCIETIES

Co-operative credit societies are registered under the Credit Unions Act, 1976-1980 which is administered by the Registrar of Credit Unions. Before 28 April 1977, when the Credit Unions Act, 1976-1980 was proclaimed, these societies were registered under the Industrial and Provident Societies Act, 1923-1974.

The societies included in this collection, which began in 1970-71, are mainly credit unions or savings and loan societies. A credit union is defined as an organisation that:

(a) is registered under the Credit Unions Act, 1976-1980; and

(b) operates on a co-operative basis by predominantly borrowing from and providing finance to its own members.

Details of assets and liabilities of these societies, given in the following table, are compiled from individual returns with a variety of balance dates. The figures are aggregates of returns submitted by societies for their relevant accounting periods closing on various dates during the financial years shown.

More detailed description and dissection of these statistics may be found in the annual bulletin *Credit Unions: Assets, Liabilities, Income and Expenditure* (Catalogue No. 5618.0).

## Co-operative Credit Societies, South Australia

Particulars	1981-82	1982-83	1983-84
		Number	
Societies .....	31	29	28
Members .....	129 525	137 163	151 592
		\$'000	
Income:			
Interest on loans to members .....	29 218	34 763	42 539
Other .....	4 463	7 181	7 638
Total .....	33 681	41 944	50 176

## Co-operative Credit Societies, South Australia (continued)

Particulars	1981-82	1982-83	1983-84
	\$'000		
<b>Expenditure:</b>			
Interest on deposits .....	21 339	27 041	30 305
Other (a) .....	11 083	13 295	17 431
<b>Total .....</b>	<b>32 422</b>	<b>40 337</b>	<b>47 736</b>
<b>Assets:</b>			
Loans to members .....	188 530	211 815	287 656
Cash in hand and at bank .....	2 158	2 295	3 681
Deposits with credit union associations and leagues .....	19 782	32 636	33 671
Investments .....	8 650	17 603	9 366
Other .....	9 307	11 424	14 192
<b>Total .....</b>	<b>228 429</b>	<b>275 772</b>	<b>348 567</b>
<b>Liabilities:</b>			
Share capital .....	1 009	1 086	1 238
Reserves and accumulated profits .....	5 884	7 434	10 163
Deposits .....	213 466	259 587	321 132
Current accounts .....	938	1 184	1 578
Loans (b) .....	5 642	4 758	11 326
Other .....	1 489	1 722	3 128
<b>Total .....</b>	<b>228 429</b>	<b>275 772</b>	<b>348 567</b>

(a) Includes interest on loans, salaries and wages, administrative expenses, bad debts and provision for doubtful debts. (b) Includes loans from credit union leagues or associations.

## INSTALMENT CREDIT FOR RETAIL SALES

Instalment credit for retail sales is defined as covering all schemes under which repayment is made by regular predetermined instalments, such as time payment, budget accounts and certain personal loans. Credit schemes which do not involve repayment by regular predetermined instalments, lay-bys and all credit transactions related mainly to the financing of 'producer' type goods such as plant, machinery and motor vehicles normally used for commercial purposes are excluded from the following statistics. Also excluded are the financing of sales of land and buildings, property improvements, services such as repair work and travel facilities, and rental and leasing schemes.

Legislation controlling instalment credit schemes in South Australia is embodied in the Consumer Transactions Act, 1972-1983 and the Consumer Credit Act, 1972-1980, both effective from 1 November 1973. Since that date, it has not been possible to enter into a hire-purchase agreement in South Australia.

The Consumer Transactions Act repealed the Hire-Purchase Agreements Act, 1960-1971 and originated 'consumer contracts', 'consumer credit contracts' and 'consumer mortgages'. Generally consumer contracts and consumer credit contracts refer to the purchase by an individual of goods or services, where their price and the principal amount of credit extended does not exceed \$10 000. Under a consumer mortgage the consumer becomes the owner of the goods when they are delivered to him and the credit provider holds a mortgage over the goods as security for the amount payable. Hence goods may still be repossessed if the consumer breaches certain conditions of the

agreement. However, subject to the conditions stipulated in the Act, the consumer may return the goods and rescind the consumer mortgage at any time.

The Consumer Credit Act repealed the Money-lenders Act and established a Credit Tribunal to which, in certain circumstances, consumers may apply for relief from the terms of a contract. The Tribunal also acts as licensing authority for those persons and corporations deemed to be credit providers under the Act and controls the conditions of operation of 'revolving charge accounts'. Information to be included in a credit contract, including the credit charge, is specified in detail by the Act.

Details of instalment credit provided by businesses (other than banks, credit unions and insurance companies) during the years 1981-82 to 1983-84 are given in the following tables. In each of these tables the motor vehicle group includes new and used motor cars, motor cycles, caravans, motor parts and accessories. Included in household and personal goods are furniture and furnishings, domestic refrigerators, electrical goods, musical instruments, bicycles, and other household and personal goods.

**Instalment Credit for Retail Sales, South Australia <sup>(a)</sup>**

Year	Amount Financed (b)						Balances Outstanding at End of Period (d) (e)	
	Motor Vehicles, etc. (c)		Household and Personal Goods		Total			
	Finance Companies	Other Businesses	Finance Companies	Other Businesses	Finance Companies	Other Businesses	Finance Companies	Other Businesses
	\$ million							
1981-82 .....	108.9	0.3	17.4	56.1	126.2	56.4	288.7	39.9
1982-83 .....	110.3	0.4	17.9	62.9	128.1	63.2	266.4	41.9
1983-84 .....	123.8	0.4	25.1	70.9	149.0	71.4	286.2	44.5

(a) The statistics of finance companies relate only to finance companies which individually or as a group of related finance companies have balances outstanding on an Australia wide basis of \$5 million or more in the prescribed types of financial agreements and to other businesses which have equivalent balances of \$500 000 or more.

(b) Excludes hiring charges, interest and insurance.

(c) Excludes motor vehicles normally used for commercial purposes.

(d) Includes hiring charges, interest and insurance.

(e) Includes Northern Territory for finance companies up to April 1983. From May 1983 excludes Northern Territory for finance companies.

**Instalment Credit for Retail Sales, Motor Vehicles etc., South Australia <sup>(a)</sup>**

Year	Cars and Station Wagons				Other Amount Financed (b)
	Number Financed		Amount Financed (b)		
	New	Used	New	Used	
	'000		\$ million		
1981-82 .....	5.2	16.9	36.7	60.9	11.6
1982-83 .....	5.3	13.5	38.4	61.1	11.2
1983-84 .....	6.9	14.0	46.8	64.4	13.1

(a) Refer footnote (a) of previous table. (b) Excludes hiring charges, interest and insurance.

## FINANCE COMPANIES

In the following tables a finance company is defined as an incorporated company mainly engaged in providing to the general public (businesses as well as persons in their

private capacity) credit facilities of the following types: instalment credit for retail sales, personal loans, wholesale finance, factoring, other consumer and commercial loans, financial leasing of business plant and equipment and bills of exchange. A company is mainly engaged in providing these credit facilities if 50 per cent or more of its assets consist of balances outstanding with respect to these types of financing, or if 50 per cent or more of its income is derived from such types of financing. Special classes of financial institutions such as unincorporated businesses, banks, life and general insurance companies, authorised dealers in the short-term money market, money market corporations (merchant banks), pastoral finance companies, investment companies, unit trusts, land trusts, mutual funds and management companies for such trusts and funds, pension and superannuation funds, building societies and friendly societies and credit unions are excluded.

Comprehensive information on the transactions of finance companies is available in the monthly bulletin *Finance Companies, Australia* (Catalogue No. 5614.0).

**Finance Companies: Summary, South Australia <sup>(a)</sup>**

Particulars	1981-82	1982-83	1983-84
	\$ million		
Amount financed .....	850.4	895.0	1 144.0
Collections and other liquidations (b) .....	1 097.4	1 218.8	1 374.9
Balances outstanding at end of period (b) .....	1 015.4	935.9	932.3
Leasing of business plant and equipment:			
Value of goods newly leased during period .....	198.7	189.1	268.0
Value of all leasing agreements at end of period (b) (c) .....	632.7	563.6	625.4

(a) The statistics relate only to finance companies which individually or as a group of related finance companies have balances outstanding on an Australia-wide basis of \$5 million or more in the prescribed types of financial agreements.

(b) Includes Northern Territory to April 1983; from May 1983 includes Northern Territory wholesale finance only.

(c) Basis of valuation is 'gross receivables'.

Finance agreements may be classified according to the purpose of the loan. The comments below are offered to clarify the content of various items in the table which follows:

- (a) instalment credit for retail sales is defined in the same way as in the previous section (see page 547);
- (b) personal loans include all loans to persons in their private capacity, other than loans classified as instalment credit or finance for housing and includes loans to persons for alterations or additions, estimated to cost less than \$10 000 to existing dwelling units;
- (c) wholesale finance relates mainly to the financing of motor vehicle dealers stocks held under bailment or floor-plan schemes but includes also financing of other trading stock and the factoring of trade debts;
- (d) finance for housing includes finance for houses, flats, home units and other dwelling units (excluding hotels, hostels, etc.), loans to persons for alterations or additions, estimated to cost \$10 000 or more to existing dwelling units, and finance for the purchase of residential blocks of land;
- (e) other commercial loans include loans for the purpose of developing a tract of land into residential blocks, construction other than housing and financing of sales of 'producer' type goods.

The following table shows the amount financed and balances outstanding classified according to the purpose of the loan for the years 1981-82 to 1983-84.

**Finance Companies: Amount Financed and Balances Outstanding Classified by Type of Finance Agreement, South Australia <sup>(a)</sup>**

Particulars	1981-82	1982-83	1983-84
\$ million			
Amount financed during year:			
Instalment credit for retail sales and personal loans ....	190.4	185.3	211.0
Finance for housing .....	62.1	72.8	122.4
Wholesale finance <sup>(b)</sup> .....	491.7	524.5	653.5
Other commercial loans .....	106.2	112.4	157.1
Leasing of business plant and equipment .....	198.7	189.1	268.0
Total amount financed .....	1 049.1	1 084.1	1 412.0
Balances outstanding at 30 June <sup>(c)</sup> :			
Instalment credit for retail sales and personal loans ....	418.1	381.7	383.2
Finance for housing .....	224.1	196.3	198.5
Wholesale finance .....	103.9	103.6	118.1
Other commercial loans .....	269.3	254.3	232.4
Leasing of business plant and equipment <sup>(d)</sup> .....	632.7	563.6	625.4
Total balances outstanding .....	1 648.0	1 499.4	1 557.7

<sup>(a)</sup> Refer footnote <sup>(a)</sup> of previous table.

<sup>(b)</sup> Includes factoring of trade debts.

<sup>(c)</sup> Includes Northern Territory to April 1983; from May 1983 includes Northern Territory wholesale finance only.

<sup>(d)</sup> Basis of valuation is 'gross receivables'.

## FINANCIAL CORPORATIONS ACT

The *Financial Corporations Act 1974* enables the Reserve Bank to examine and regulate the business activities of non-bank financial intermediaries (finance companies, building societies, credit unions, etc.) and large retailers which finance their sales by instalment credit schemes.

In order to perform its monitoring and control function, the Reserve Bank is empowered by the Act to collect monthly information from each of the larger financial corporations (assets in excess of \$5 million) and from the larger retailers (balances outstanding in excess of \$5 million on instalment credit for retail sales agreements). Other financial corporations with total assets in excess of \$1 million are also required to submit information at less frequent intervals.

## HOUSING FINANCE FOR OWNER OCCUPATION

A monthly statistical series was introduced in October 1975 to provide information on finance (secured by mortgage or other security, including secured personal loans and contracts of sale) approved by significant lenders to individuals for the construction or purchase of dwellings for owner occupation. Also included is housing finance provided to employees by lenders covered in the collection.

The types of lenders included in these statistics are trading and savings banks, permanent and terminating (Starr-Bowkett) building societies, finance companies, government housing authorities and other government departments, insurance companies and credit unions. A lender is significant if over a financial year it approves loans to individuals for housing finance for owner occupation in excess of \$250 000 or if at the end of a financial year it has balances outstanding on such loans exceeding \$2 million.

*Purchase of newly erected dwellings* represents the purchase of dwellings which have been completed or will be completed within a period of twelve months preceding the date of purchase and where the purchaser is, or will be, the first occupant.

*Purchase of established dwellings* represents the purchase of dwellings which have been completed for a period of greater than twelve months preceding the date of purchase or, if completed within twelve months, where the purchaser is not the original occupant.

The term *dwelling* includes houses and other dwellings where the latter is defined as a self-contained dwelling unit other than a house. (Examples of other dwellings are flats, home units, semi-detached cottages, villa units and town houses).

The term *number of dwelling units* refers to the number of houses and other dwellings for which loans secured by contract of sale or first mortgage only have been approved.

Comprehensive statistics on housing finance for owner occupation are available in the monthly bulletin *Housing Finance for Owner Occupation* (Catalogue No. 5609.0).

#### Housing Finance for Owner Occupation: Number of Dwelling Units for which Loans were Approved to Individuals by Type of Lender, South Australia

Period	Banks		Permanent Building Societies (a)	Finance Companies	Government n.e.i.	Other	Total
	Savings	Trading					
CONSTRUCTION OF DWELLINGS							
1981-82 .....	1 270	734	274	118	116	91	2 603
1982-83 .....	1 392	736	324	51	136	195	2 834
1983-84 .....	2 253	1 166	871	147	203	246	4 886
PURCHASE OF NEWLY ERECTED DWELLINGS							
1981-82 .....	523	459	98	11	93	186	1 370
1982-83 .....	476	331	55	13	61	35	971
1983-84 .....	773	336	353	12	61	57	1 592
PURCHASE OF ESTABLISHED DWELLINGS							
1981-82 .....	7 860	3 346	2 864	194	497	1 277	16 038
1982-83 .....	8 590	2 973	3 319	160	469	1 002	16 513
1983-84 .....	9 744	3 067	6 778	164	390	1 347	21 490
TOTAL							
1981-82 .....	9 653	4 539	3 236	323	706	1 554	20 011
1982-83 .....	10 458	4 040	3 698	224	666	1 232	20 318
1983-84 .....	12 770	4 569	8 002	323	654	1 650	27 968

(a) Includes terminating (Starr-Bowkett) societies.

#### Housing Finance for Owner Occupation, South Australia

Period	Loans Approved for		Cancellations of Loans Previously Approved	Loans Advanced (a)	Loans Approved but not Advanced (a)
	Construction or Purchase of Dwellings	Alterations and Additions			
\$'000					
1981-82 .....	533 112	31 201	19 300	415 663	66 718
1982-83 .....	565 009	30 686	18 666	446 283	71 922
1983-84 .....	893 967	45 160	19 885	680 567	151 299

(a) Excludes trading banks.

#### Housing Finance for Owner Occupation: Value of Loans Approved to Individuals by Type of Lender, South Australia

Period	Banks		Permanent Building Societies (a)	Finance Companies	Government n.e.i.	Other	Total
	Savings	Trading					
CONSTRUCTION OF DWELLINGS							
\$'000							
1981-82 .....	34 939	21 225	10 377	5 015	2 836	2 252	76 644
1982-83 .....	39 004	22 410	11 066	2 378	3 617	5 644	84 119
1983-84 .....	70 373	38 270	32 023	6 429	5 053	8 007	160 155

**Housing Finance for Owner Occupation: Value of Loans Approved to Individuals by Type of Lender, South Australia (continued)**

Period	Banks		Permanent Building Societies (a)	Finance Companies	Government n.e.i.	Other	Total
	Savings	Trading					
PURCHASE OF NEWLY ERECTED DWELLINGS							
\$'000							
1981-82 .....	13 815	13 076	3 488	1 129	2 021	5 293	38 822
1982-83 .....	13 094	9 201	1 817	718	1 343	707	26 880
1983-84 .....	23 611	9 779	12 572	394	1 482	1 825	49 663
PURCHASE OF ESTABLISHED DWELLINGS							
\$'000							
1981-82 .....	192 615	83 312	89 735	9 408	10 828	31 748	417 646
1982-83 .....	222 470	77 284	112 023	7 088	10 560	24 585	454 010
1983-84 .....	290 143	92 878	247 089	8 299	9 423	36 317	684 149
TOTAL							
\$'000							
1981-82 .....	241 369	117 613	103 753	15 552	15 685	39 293	533 265
1982-83 .....	274 568	108 895	124 906	10 184	15 520	30 936	565 009
1983-84 .....	384 127	140 927	291 684	15 122	15 958	46 149	893 967

(a) Includes terminating (Starr-Bowkett) societies.

**Further References**

Additional information may be found in the following publications:

- 5609.0 *Housing Finance for Owner Occupation—Australia*
- 5614.0 *Finance Companies—Australia*
- 5617.0 *Financial Corporations Statistics—Australia*
- 5618.0 *Credit Unions: Assets, Liabilities, Income and Expenditure—Australia*
- 5620.0 *General Insurance—Australia*
- 5631.0 *Instalment Credit for Retail Sales—Australia*
- 5632.0 *Permanent Building Societies: Assets, Liabilities, Income and Expenditure—Australia*
- 5635.0 *Cash Management Trusts—Australia*



## REGIONAL STUDIES

### ADELAIDE

The region covered in this study is the Adelaide Statistical Division, which comprises the cities of Adelaide, Brighton, Burnside, Campbelltown, Elizabeth, Enfield, Glenelg, Happy Valley, Henley and Grange, Kensington and Norwood, Marion, Mitcham, Munno Para, Noarlunga, Payneham, Port Adelaide, Prospect, Salisbury, Tea Tree Gully, Unley, West Torrens and Woodville; the municipalities of Gawler, Hindmarsh, St Peters, Thebarton and Walkerville; the district councils of East Torrens and Stirling; parts of the district councils of Gumeracha, Light, Onkaparinga and Willunga; and the unincorporated area of Torrens Island.

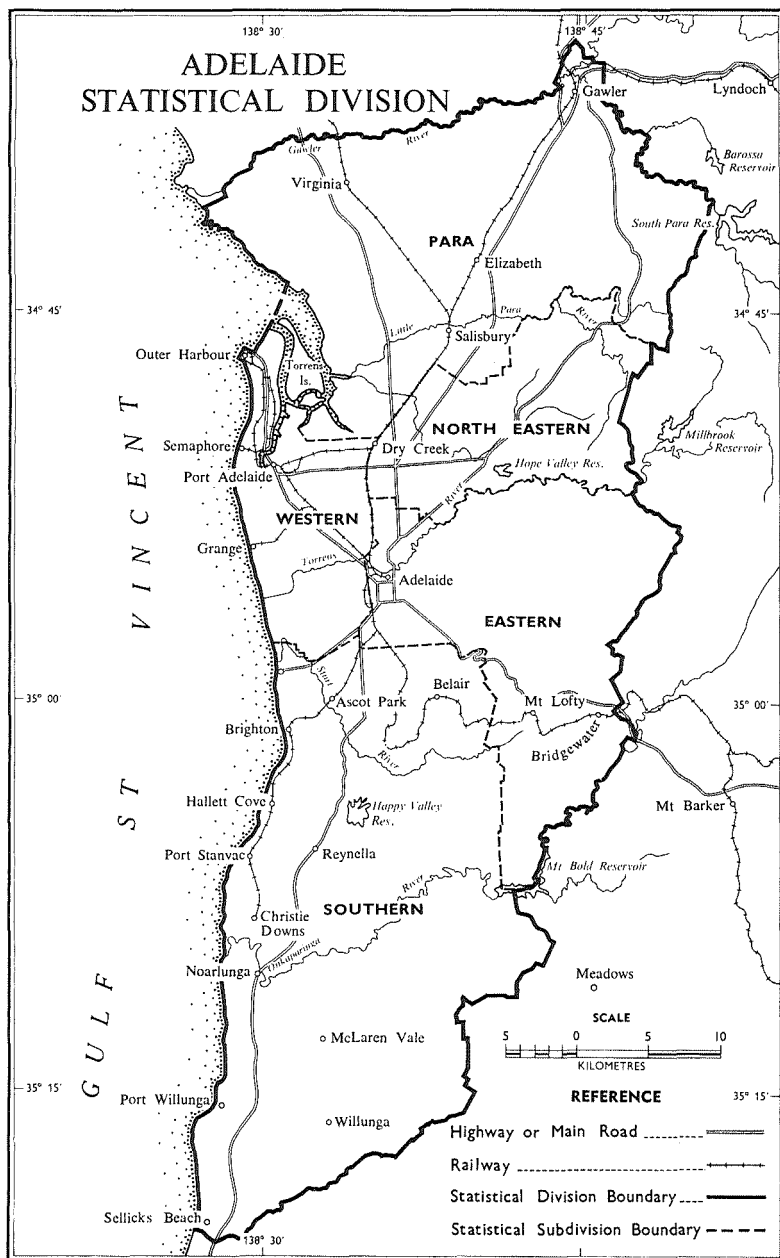
The Division has an area of 1 870 square kilometres which is about one fifth of one per cent of the State.

The estimated resident population of the Adelaide Statistical Division at 30 June 1983 was 978 940 persons, or 72 per cent of the State total. The location and boundaries of the Division are shown on the map on the following page.

#### European Settlement

Following the persistent efforts of Robert Gouger, Robert Torrens and others to form a colony in South Australia based on E.G. Wakefield's principles, the South Australian Colonisation Act was assented to in 1834.

Captain John Hindmarsh, R.N. was gazetted Governor of the new province on 4 February 1836. A month later the *Cygnets*, 243 tonnes, left London, having on board Captain Lipson, harbour-master; Dr Wright, surgeon; Messrs George Kingston, Finnis,



Neale, Symonds, Hardy and Cannan, surveyors; Mr T. Gilbert, storekeeper; Mr John Morphet, and a number of passengers. The *Rapid*, 138 tonnes, with Colonel William Light, left some weeks later, but arrived at Kangaroo Island nearly a month before the *Cygnat*. Colonel Light immediately began his task of choosing a suitable site for the capital and finding a place for the chief sea-port.

The *Buffalo*, with Governor Hindmarsh on board, dropped anchor in Holdfast Bay on 28 December 1836. Hindmarsh landed the same day, and under the shade of gum trees close to the beach the Union Jack was hoisted and the proclamation 'erecting the colony into a province' read.

The exploration and colonisation of Adelaide and its environs are discussed on pages 43-6 of this volume.

### Physical Features

The Adelaide Statistical Division embraces the centre of population, secondary industry and commerce of the State. It is bounded on the west by the sea, on the north by the Gawler River and the east and south by the Mount Lofty Ranges.

The highest point is Mount Lofty (725 metres) and the more important water-courses of the region include the Gawler, South Para, Little Para, Port, Torrens, Sturt and Onkaparinga Rivers and Dry Creek.

A large proportion of the Division has been cleared for urban and agricultural purposes.

### Climate and Meteorology

The climate of the Adelaide Statistical Division is strongly influenced by its proximity to the waters of Gulf St Vincent to the west and the Mount Lofty Ranges to the east. The climate can be described as temperate with warm dry summers and cool wet winters.

#### Rainfall

The Mount Lofty Ranges have a dominating effect on the distribution of rainfall across the Adelaide region. Average annual rainfall increases from less than 450 mm over the lower parts of the Adelaide Plains to more than 600 mm near the foothills. Totals then increase rapidly to between 800 and 1000 mm along the top of the ranges. In the vicinity of Mount Lofty, the average annual totals exceed 1100 mm.

The distribution of rainfall is distinctly seasonal with about 40 per cent of the annual total being recorded during the winter months of June, July and August compared with 10 to 15 per cent in summer. Monthly and annual rainfall totals for selected stations are listed, together with average rain day data, in the following table.

**Average Rainfall and Days of Rain: Selected Stations, Adelaide**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
AVERAGE RAINFALL (MILLIMETRES)													
Adelaide Airport .....	19	21	23	41	59	52	61	48	44	39	26	22	455
Adelaide (West Terrace) .....	20	21	24	44	68	72	67	62	51	45	31	26	531
Aldinga .....	17	19	22	41	63	73	69	61	53	42	26	21	733
Belair .....	25	26	31	61	96	103	96	88	74	60	40	33	733
Brighton .....	16	21	23	39	63	74	63	62	55	43	31	24	514
Gawler .....	26	18	32	38	45	49	55	45	44	53	21	19	445
Glen Osmond .....	25	26	24	36	79	74	87	73	62	54	38	30	628
McLaren Vale .....	24	25	22	51	73	72	77	67	50	49	33	26	369
Northfield .....	23	24	27	51	64	54	65	60	50	47	26	27	518
Parafield .....	24	20	22	45	47	51	58	54	43	47	29	25	465
Smithfield .....	19	20	22	37	57	58	55	56	49	42	29	24	468
Stirling .....	38	41	52	99	134	120	174	140	119	95	61	48	1121
Tea Tree Gully .....	25	24	29	59	84	95	87	85	71	58	40	33	690
Virginia .....	20	19	20	36	51	55	50	52	44	39	27	24	437
Willunga .....	21	22	28	52	85	92	92	80	68	55	33	25	653

## Average Rainfall and Days of Rain: Selected Stations, Adelaide (continued)

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
	AVERAGE NUMBER OF DAYS OF RAIN												
Adelaide Airport .....	5	4	6	10	14	13	16	16	13	11	8	7	123
Adelaide (West Terrace) .....	4	4	5	9	13	15	16	16	13	11	8	6	120
Aldinga .....	2	2	4	6	12	13	16	13	11	7	5	4	114
Belair .....	4	4	5	9	13	14	16	15	12	10	7	5	114
Brighton .....	3	3	4	8	12	14	15	14	11	10	6	5	105
Gawler .....	5	3	7	8	12	14	16	15	13	10	6	5	114
Glen Osmond .....	6	5	6	11	15	16	19	18	15	13	9	7	140
McLaren Vale .....	3	3	3	7	12	10	14	19	13	8	6	4	102
Northfield .....	5	3	7	10	13	13	17	16	14	11	7	6	122
Parafield .....	5	4	5	9	12	14	16	15	13	11	8	6	118
Smithfield .....	2	2	3	5	10	8	11	13	9	7	4	3	77
Stirling .....	8	6	10	12	16	16	19	19	16	14	10	9	155
Tea Tree Gully .....	4	3	5	7	12	14	15	15	13	11	7	5	111
Virginia .....	3	3	4	7	11	12	13	13	10	9	6	4	95
Willunga .....	3	3	4	8	13	15	15	16	13	10	6	5	111

Rainfall during the period November to March is normally too low to be of any benefit for agricultural purposes. The first effective rains usually occur during April or May and continue through to September or October. Most of the region has a growing season of more than six months.

## Temperatures

The average daily maximum temperatures in summer range between 25°C in the higher parts of the Mount Lofty Ranges to nearly 30°C in the northern Adelaide Plains. Extreme temperatures in excess of 43°C have been recorded in all parts of the district.

Average minimum temperatures in the winter range from about 4°C in the hills to about 7°C near the coast. Extreme minima of minus 7°C have been recorded in the Adelaide Hills.

Average maximum and minimum temperatures are shown in the following table.

## Average Temperature at Selected Stations, Adelaide

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	AVERAGE MAXIMUM TEMPERATURE (°CELSIUS)											
Adelaide Airport .....	28.0	27.9	25.3	22.1	18.3	16.0	14.9	15.9	17.9	20.8	23.6	25.5
Adelaide (West Terrace) .....	28.4	28.1	25.5	22.2	18.3	16.1	15.0	15.9	17.9	21.1	23.7	25.6
Belair .....	26.7	26.7	24.0	20.0	16.4	13.2	12.4	13.7	15.9	19.3	22.5	24.8
Glen Osmond .....	27.7	27.4	25.6	21.4	17.7	15.0	14.2	15.1	17.5	20.2	23.1	25.7
Northfield .....	28.7	29.1	25.8	22.3	18.0	15.4	14.7	15.3	17.1	20.8	23.9	26.3
Parafield .....	28.3	27.6	26.3	21.6	18.3	15.5	14.9	15.9	17.5	20.8	23.8	27.1
Stirling .....	24.7	24.8	22.3	18.0	14.3	11.5	10.6	11.8	14.2	17.0	20.1	22.7
	AVERAGE MINIMUM TEMPERATURE (°CELSIUS)											
Adelaide Airport .....	15.5	15.8	14.1	11.7	9.3	7.3	6.8	7.4	8.6	10.4	12.2	14.1
Adelaide (West Terrace) .....	17.2	17.4	15.8	13.4	10.8	8.9	8.0	8.4	9.7	11.8	13.4	15.4
Belair .....	14.8	15.5	14.1	12.0	10.0	7.8	6.9	7.4	8.4	10.0	11.9	13.3
Glen Osmond .....	16.0	16.3	15.3	12.8	10.5	8.3	7.7	7.8	9.2	10.6	12.5	14.4
Northfield .....	16.9	17.5	15.5	13.3	10.3	8.2	7.6	7.7	8.7	10.9	12.9	15.0
Parafield .....	16.0	15.9	14.8	12.1	9.7	7.3	6.6	6.7	8.1	10.2	12.2	14.9
Stirling .....	11.6	12.0	10.5	8.7	7.0	5.5	4.7	4.9	6.0	7.2	8.8	10.4

### *Frosts*

The incidence of frost varies throughout the Adelaide Division. The most susceptible sites are valleys and hollows in the Adelaide Hills. On the plains the low-lying area to the north-west of the district is the most prone to frosts. The first frosts are generally experienced in April and extend through until November.

### *Winds*

In the summer the prevailing winds over southern South Australia are from the south-east. However, in the afternoon, winds in the Adelaide plains generally swing to the south and south-west.

During the winter, prevailing winds are from the north-west to west.

### *Evaporation*

Average annual evaporation, recorded by a Class 'A' pan fitted with a bird guard, ranges from about 1900 mm along the coast and in the hills to 2100 mm in the North Adelaide plains.

### *Phenomena*

Thunderstorms can be experienced at any time of the year, but are more frequent during late spring.

Hail is not a frequent phenomenon and is reported most often in winter. Summer hailstones tend to be larger and may cause damage to glass houses.

Snow falls have been reported on the upper peaks of the Adelaide Hills in all months from April to December, but most commonly occur between July and September. Snow is rarely if ever seen in other parts of this district.

Dust storms are comparatively rare and occur only during severe droughts. They are generally associated with strong northerly winds during summer.

Fogs most frequently occur in the morning during autumn and winter months.

### *Soils\**

Soils are the surface cover of landscapes, and modern soil science considers them inseparable partners.

The main landscape features around Adelaide are the Mount Lofty Ranges, with a remarkably flat skyline viewed from a distance, a steep step down across the Hills Face Zone onto the foothills and flatter landscape of the eastern and northern Adelaide suburbs and the city, and a smaller step down to the western suburbs grading down to the beaches. The Mount Lofty Ranges form the natural eastern boundary of Adelaide and, by swinging towards the coast, form the southern boundary as well. The swing and descent towards the coast is in three prongs: the Eden block, reaching the coast at Seacliff; the Clarendon block at Moana, with the Ochre Cove-Clarendon fault running up between this and the Eden block; and the Willunga block cutting the coast at Sellicks Hill. Hence the hills, Hills Face Zone, and outwash plain sequence is present twice more in the south of the Adelaide Statistical Division; there are the steps down from Happy Valley to Morphett Vale and Port Noarlunga, and those from Kangarilla to McLaren Vale and Port Willunga. Each landscape has its slightly different soil cover, in part because geological events have put different soil parent-materials onto them. However, the general pattern is very similar throughout the area.

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\* Contributed by C.B. Wells, Division of Soils CSIRO, Glen Osmond.

*History of Landscape Development*

In the Mesozoic Era the whole of the Adelaide Statistical Division was probably one extensive, almost flat peneplain (hence today's generally flat skyline) pierced only by the peaks of an ancient Mount Lofty and Mount Gawler.

The extensive plain was considerably disrupted by Tertiary Era tectonic movement that by up-faulting raised, (particularly in the north), the hard rocks under the peneplain into a series of parallel southward-tilting blocks leaning against each other that still exists as the backdrop to the Adelaide area, and which formed the gulfs by down-faulting. The Para faults, (seen today as the break-of-slope through the North Adelaide Golf Course and around Prospect to Gepps Cross and on up to the Old Spot Hotel and through Gawler), have left the western suburbs relatively lower than those to its east. The Burnside Eden faults (running from the base of the hills at Seacliff to Clapham and through the Waite Institute at Glen Osmond to Magill and Athelstone, and beside Perseverance Road at Tea Tree Gully) separate the Adelaide Hills to the east from the suburbs and city of Adelaide. The south-east edge of the Division is clearly defined because the hills there were raised above the Willunga plain along the Willunga fault zone from Sellicks Beach to the base of Willunga Hill, and towards Kangarilla and the Mount Bold Reservoir on the Onkaparinga River.

*History of Parent-material Development*

Soil formation over a long period transformed the surface material of the peneplain by the end of Tertiary Era times into a deep, ironstone-gravelly to lateritic, sand soil cover; during the tectonic dissection and uplift that followed it was eroded and transported off each block to infill lower elevation landscapes, including the present gulf, and to become new parent-materials for soils on them.

The erosion exposed the rocks beneath the peneplain to the natural processes of weathering into component grains, and by partial erosion and downslope transport of the grains into the valleys there emerged an accumulation of another intermediately weathered soil parent-material derived but differing from, the more freshly weathered materials on the hills above.

Some erosion gullies on the fault blocks developed into valleys and gorges through the up-faulted block scarps towards the coast and the plains. Thus, etched into the landscape are rivers and creeks like the North and South Para Rivers (and their downstream continuation, the Gawler River), Dry Creek, the Torrens and Sturt Rivers, Pedlars Creek, and the Onkaparinga River, and many others, cutting through the hills across the plains and in some cases to the sea. Thus was a further generation of soil parent-materials delivered from one surface onto the next as broad fan-shaped humps hugging the break-of-slope between the hills and the plains where each drainage system emerged. To the extent that each of these streams drew its sediment load from its own source area (or depth) with a different geology, the soil parent-materials each one of them delivered also varied, thus giving rise to different present day soils on the fans in the Adelaide and Willunga basins.

*Coastal Influences on Parent-material Development*

The second major influence on the soils of the area is the existence of the Gulf St Vincent as the western boundary.

The sea has been at its present level for about 6000 years, having been through several cycles previously of certainly up to eight metres higher and at least 100 metres lower than the present landscape or seabed. One effect of the higher sea level, combined with downfaulting of some blocks, was to take the marine influence further inland than at present into an Adelaide embayment, a Noarlunga embayment, and a Willunga embay-

ment. As a result, not only were calcareous marine and beach sediments deposited over the top of existing terrestrial ones, but the rivers were shortened and their steepness reduced and therefore the sand-sized component of their load was dumped further landward than before; hence the sandy soil parent-materials occurring at the landward extremities of the embayments, such as at Golden Grove—Tea Tree Gully, Happy Valley—Reynella, and Pedlar Creek in the valleys where one block leaned against another.

### *The Parent-materials and Soils*

The great variety of parent-materials exposed or deposited in the Adelaide Statistical Division can for simplicity be allocated to five main classes: Sands, Calcareous materials, Clays, Finer grained felspar-rich materials, and Coarse-grained quartz-rich materials. Northcote (1976) showed the unique relationship of at least nineteen soils of the region to the five generalised soil parent-materials.

The parent-materials in the higher eastern ends of the Eden, Clarendon, and Willunga Blocks are essentially siliceous and no longer or never affected by the calcareous coastal influence. Thus in the Mount Lofty Ranges from Gawler to Willunga the tops and upper slopes of the many rounded hills are covered by podzolic (yellow duplex) soils, becoming red or mottled in the middle or lower slope sites; some are pedal, some are not. On remnants of the ancient peneplain, although the flat hilltops carry weakly structured sandy lateritic podzolic soils, the same general sequence is found downslope, with a mixture of alluvial soils in the valley bottoms. On steep ridges and along the gorges either bare rock is exposed or there is very little soil development, usually described by the terms 'lithosols' or 'skeletal soils'; the same applies across the Eden, Clarendon, and Willunga fault scarps.

Along the spines of the three fault blocks, as each descends towards the coast the parent-materials become argillaceous and calcareous and the soils change gradually through red-brown earths (hard pedal red duplex soils) to terra rossa and rendzina soils (friable loam), in contrast to the yellow soils upslope.

Coming off the spine and across the fault scarp to the outwash plains below there are slight soil differences in the progression down into the different embayments. Below the landward end of the Willunga fault scarp at McLaren Flat there are red-brown earths but predominantly podzolic and solodised solonetz soils (sandy yellow duplex soils) where there are Tertiary deposits tucked against the fault scarps. At the coastward end from near Willunga the soils are predominantly a mixture of red-brown earths (red duplex) and black clay soils. Descending from the Clarendon block into the Noarlunga embayment there is a very similar sequence. At the landward end around Happy Valley there are Tertiary sediments again and their solodised solonetz soils, but otherwise a strong presence of black clay soils. At the coastward end of the descent down the scarp at Morphett Vale the red-brown earth and black clay association is present as in the Willunga basin. In each case the soils in the embayment adjoin the extensive coastal band of terra rossa and rendzina soils extending from Seaview Downs to Aldinga and inland as far as Reynella and McLaren Vale.

In the Adelaide embayment at the base of the Burnside-Eden fault zone the soils story is more or less repeated, but the additional fault block created by the Para faults adds, north of Adelaide, another lower outwash plain and suite of soils. Also, the coastward edge of the Para block from Ingle Farm through Enfield and North Adelaide to the West Terrace Cemetery differs in bearing solonised brown (gradational calcareous earth) soils. The extreme coastward end of the Eden block at Seacliff similarly, but unlike the Clarendon and Willunga blocks, bears these soils. In the gap between these occurrences the Para block surface has been buried under a cover of red-brown earth soils from

Parkside to Brighton on an extended outwash plain below the Burnside fault scarp; it also extends as a narrow strip north from Kent Town to Klemzig. There is an association of rendzina and terra rossa soils with red-brown earths and black clay soils from Modbury down through the eastern suburbs to Mitcham and Sturt. This lies both inland of and between the areas of solonised brown soils on the Para and Eden blocks. At the base of the Eden fault zone, but much further inland than in the Noarlunga and Willunga embayments, there are in the Tea Tree Gully and Golden Grove area podzolic and some solodised solonetz soils on Tertiary sediments.

On the lower outwash plain below the Para block there are from Elizabeth West to Woodville and Camden Park sandier red-brown earths (red duplex soils) spreading out from the Para fault zone, and becoming mottled in the wetter parts nearer the coastal zone. Toward the north of the Adelaide Statistical Division the coast is progressively further from the hills. On the resulting triangular segment of plain coastward of the outwash plain north of Salisbury the red-brown earths (hard pedal red duplex soils) are accompanied by solonised brown soils (gradational calcareous earths).

The coastal beaches and coastal plain immediately inland are covered by calcareous sands grading inland to various saline soils.

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### Birds of Adelaide

Adelaide Statistical Division is largely urban, and very little of the original natural environment remains unmodified. However, the area contains numerous parks, reserves and open space, in addition to private gardens. The trend towards planting native trees and shrubs by home gardeners, councils, and schools, and the on-going 'Greening of Australia' program encourages a variety of birdlife, even in the city centre.

In the city square mile feral pigeons find that ledges on tall buildings provide an excellent substitute for the cliff faces which were their original habitat. Ravens also seem to like tall city buildings, while starlings, sparrows and welcome swallows find nesting places in the inner city. Silver gulls can be seen scavenging wherever there are scraps or rubbish, and their presence is a feature at any sporting event on ovals around the city.

In the Adelaide parklands, common birds are crested pigeons, galahs, rosellas and lorikeets, red-rumped parrots, wattle-birds, noisy miners, New Holland and white-plumed honey eaters, ravens, magpies, magpie larks and willy wagtails. Along the River



Torrens waterbirds to be seen include cormorants, terns, reed warblers, swamp hens, white-faced herons, the occasional pelican and swan and a variety of domestic and native ducks. Broods of ducklings being led to the Torrens from city nesting places have been known to rate police escorts.

An established suburban garden with native trees and shrubs anywhere in the division could expect to play host to roughly fifteen different bird species. Common garden birds include the introduced blackbird, starling, sparrow and spotted turtledove; the native New Holland and white-plumed honey eaters, the little and the red wattle birds, lorikeet, willy wagtail, magpie lark and black-faced cuckoo shrike. Residents of beach or foothills suburbs would see an even greater variety.

Favouring ovals and open grasslands, the masked lapwing (or spur-winged plover) can be recognised by its distinctive call, especially at night. Small kites and the Australian kestrel also favour more open areas, for example airports and abattoir paddocks. The barn owl and boobook owls are not uncommon night hunters in the suburbs.

Because of Adelaide's singular system of parklands, its situation between hills and sea, its waterways and extensive suburban gardens, and the enlightened attitudes of some private, State and local government bodies, it is a city in which residents are never far from evidence of the natural world.

Additionally, the proximity of a variety of preserved habitats like the mangroves at St Kilda, National Parks in the hills and areas of bush, such as Aldinga Scrub, mean residents have access to and can learn from these pockets of native vegetation and wildlife.

### Population

The estimated number of persons resident in Adelaide Statistical Division at 30 June 1984 was 978 940, representing 72.5 per cent of the State total.

The following table shows the estimated resident population since 1976 in Adelaide Statistical Division and South Australia, using 1984 boundaries.

**Estimated Resident Population, Adelaide Statistical Division and South Australia**

Area	At 30 June		
	1976	1981	1984 <sub>p</sub>
Adelaide (C) .....	12 060	11 190	12 000
Brighton (C) .....	22 380	20 320	19 680
Burnside (C) .....	39 630	38 690	38 440
Campbelltown (C) .....	42 670	44 300	45 480
East Torrens (DC) .....	4 750	5 220	5 610
Elizabeth (C) .....	34 470	33 310	32 420
Enfield (C) .....	74 940	68 020	66 910
Gawler (M) .....	6 230	6 300	6 730
Glenelg (C) .....	14 720	13 550	13 720
Gumeracha (DC) (part) (a) .....	750	950	1 090
Henley and Grange (C) .....	17 040	15 870	15 200
Hindmarsh (M) .....	9 010	7 810	8 010
Kensington and Norwood (C) .....	9 830	8 990	8 920
Light (DC) (part) (a) .....	540	900	890
Happy Valley (C) .....	12 560	20 490	25 240
Marion (C) .....	69 500	68 780	70 540
Mitcham (C) .....	61 660	61 690	62 090
Munno Para (DC) .....	23 010	27 620	29 800

**Estimated Resident Population, Adelaide Statistical Division and South Australia**  
(continued)

Area	At 30 June		
	1976	1981	1984 <sup>p</sup>
Noarlunga (C) .....	49 020	62 630	68 620
Onkaparinga (DC) (part) (a) .....	110	100	120
Payneham (C) .....	18 180	17 020	16 730
Port Adelaide (C) (b) .....	36 860	36 480	37 160
Prospect (C) .....	20 180	19 160	19 030
St Peters (M) .....	9 660	8 710	8 550
Salisbury (C) .....	79 210	88 230	91 410
Stirling (DC) .....	10 940	13 550	14 590
Tea Tree Gully (C) .....	57 060	69 080	72 740
Thebarton (M) .....	10 680	9 500	9 450
Unley (C) .....	38 210	36 730	36 840
Walkerville (M) .....	7 430	7 020	7 060
West Torrens (C) .....	49 480	46 220	46 070
Willunga (DC) (part) (a) .....	4 240	6 340	7 530
Woodville (C) .....	77 090	79 230	80 310
Unincorporated .....	Included with Port Adelaide		
<b>Total Adelaide</b> .....	<b>924 060</b>	<b>953 960</b>	<b>978 940</b>
<b>South Australia</b> .....	<b>1 273 950</b>	<b>1 318 770</b>	<b>1 352 990</b>

(a) Part in Adelaide Statistical Division and part in Outer Adelaide Statistical Division.

(b) Includes that part of Unincorporated in the Adelaide Statistical Division.

(C) Municipality with city status (DC) District Council (M) Municipality

Most population characteristics are available only on the basis of Census Counts. The age distribution however, is also available on the basis of estimated resident population. An information paper entitled *Population Estimates: An Outline of the New Conceptual Basis of ABS Population Estimates* (Catalogue No. 3216-0) provides details of the conceptual difference.

The following two tables show the age distribution of the estimated resident population, and birthplace of persons counted at the Census.

**Age Distribution: Estimated Resident Population, Adelaide Statistical Division and South Australia, 30 June 1981**

Age Group (Years)	Adelaide		South Australia	
	Persons	Per Cent	Persons	Per Cent
0-9 .....	134 910	14.1	197 310	15.0
10-19 .....	164 580	17.3	231 190	17.5
20-29 .....	163 180	17.1	223 090	16.9
30-39 .....	138 200	14.5	190 640	14.5
40-49 .....	99 350	10.4	135 800	10.3
50-59 .....	105 610	11.1	142 610	10.8
60-69 .....	81 640	8.6	110 780	8.4
70 and over .....	66 510	7.0	87 370	6.6
<b>Total</b> .....	<b>953 960</b>	<b>100.0</b>	<b>1 318 770</b>	<b>100.0</b>

**Birthplace: Persons in Adelaide Statistical Division and South Australia, 30 June 1981 <sup>(a)</sup>**

Country of Birth	Adelaide		South Australia	
	Persons	Per Cent	Persons	Per Cent
Australia .....	672 977	72.2	979 675	76.2
Overseas born:				
UK and Ireland .....	128 405	13.8	152 087	11.8
Italy .....	28 750	3.1	31 323	2.4
Greece .....	12 304	1.3	14 206	1.1
Germany <sup>(b)</sup> .....	11 929	1.3	14 755	1.1
Netherlands .....	8 076	0.9	10 646	0.8
Yugoslavia .....	7 495	0.8	9 066	0.7
Poland .....	6 096	0.7	6 786	0.5
Other countries .....	47 582	5.1	55 633	4.3
Total overseas born .....	250 637	26.9	294 502	22.9
Not stated .....	8 272	0.9	10 855	0.8
Total .....	931 886	100.0	1 285 031	100.0

<sup>(a)</sup> Census Counts not adjusted for underenumeration.<sup>(b)</sup> Includes the German Democratic Republic and the German Federal Republic.**Births and Deaths**

The following two tables compare the number of births, birth rate, number of deaths and death rate for Adelaide Statistical Division and South Australia.

**Live Births: Number Registered and Rate, Adelaide and South Australia**

Year	Adelaide		South Australia	
	No.	Rate <sup>(a)</sup>	No.	Rate <sup>(a)</sup>
1981 .....	13 288	13.9	19 351	14.7
1982 .....	13 260	13.8	19 294	14.5
1983 .....	13 418	13.8	19 830	14.8

<sup>(a)</sup> Rate per 1 000 estimated resident population at 30 June.**Deaths: Number Registered and Rate, Adelaide and South Australia**

Year	Adelaide		South Australia	
	No.	Rate <sup>(a)</sup>	No.	Rate <sup>(a)</sup>
1981 .....	7 266	7.6	9 706	7.4
1982 .....	7 771	8.1	10 457	7.9
1983 .....	7 343	7.6	9 869	7.4

<sup>(a)</sup> Rate per 1 000 estimated resident population at 30 June.

## Education

### Schools

At 1 July 1984 the Education Department was responsible for 284 primary schools, one primary/secondary school, 68 secondary schools and 17 special schools in the Adelaide Statistical Division.

In addition to the government schools there were 125 non-government schools.

### Students at Government and Non-government Schools in Adelaide Statistical Division At 1 July 1984

Level of Study	Government			Non-Government		
	Males	Females	Total	Males	Females	Total
Primary .....	41 949	38 723	80 672	10 728	10 625	20 543
Primary/secondary .....	219	257	476	<i>n.y.a.</i>	<i>n.y.a.</i>	<i>n.y.a.</i>
Secondary .....	27 641	25 331	52 972	9 815	10 460	21 085
Special .....	749	489	1 238	<i>n.y.a.</i>	<i>n.y.a.</i>	<i>n.y.a.</i>
Total .....	70 558	64 800	135 358	20 543	21 085	41 628

### Further Education

#### Universities

The Adelaide Statistical Division has two Universities, The University of Adelaide and Flinders University. Enrolment figures for the two Universities in 1984 were; at Adelaide, 9 304; at Flinders, 4 460.

#### Technical and Further Education (TAFE)

TAFE operates fourteen colleges in the Adelaide Statistical Division, with the Adelaide college having several sites. Enrolment numbers for 1983 were 177 969 students.

#### South Australian College of Advanced Education

There are four locations of the College, at Adelaide, Magill, Salisbury and Sturt. In 1984 there were 11 134 students enrolled in courses offered by the College.

### Libraries

Public libraries have operated in the Division since the late 1950s, the first service established being the Elizabeth South branch of the Elizabeth Library system in December 1957. Other long established libraries are located at Brighton, Burnside, Greenacres (Enfield), Salisbury, Walkerville and West Torrens.

Recent developments have included the establishment of a joint-use library at Noarlunga in co-operation with TAFE, a public library at St Peters, and in 1984 The Hub Community Library, a co-operative public library project sponsored jointly by the City of Happy Valley and the Education Department at Aberfoyle Park.

There are thirty-eight library service points in the Adelaide region in addition to nine mobile libraries operating from Burnside, Marion, Munno Para, Noarlunga, Port Adelaide, Salisbury, West Torrens and Woodville. At June 30 1984 the combined bookstocks of all the metropolitan public libraries amounted to 1 069 033 volumes.

Libraries will be opening at Clearview (Enfield) and Gawler in 1985 and the City of Adelaide has approved in principle the establishment of a public library at North

Adelaide in the near future, leaving only one Council area in the region which has yet to make a commitment to providing a public library.

The most dramatic period of expansion in the Adelaide region was in 1977-79 when ten new services came into operation in the Western Region at Henley and Grange, Hindmarsh, Port Adelaide (Central, Semaphore Branch and Mobile Library), Thebarton, West Torrens (Mobile Library) and Woodville (Central, West Lakes Branch and Mobile Library).

All libraries are part of a state-wide network linked to the Public Libraries Division of the State Library of South Australia, which provides back-up assistance in resources and dispenses State subsidies to local authorities maintaining public library services.

### *Museums*

The South Australian Museum is the principal museum in the State. It contains the nation's best collections of Aboriginal cultural artefacts, and other notable collections. The museum is located on North Terrace between the State Library and the South Australian Art Gallery. It was founded in 1856 shortly after the settlement of the State. The South Australian collections form an unrivalled resource of historical, cultural and scientific information covering much of the State's history. The museum has an information service which deals with queries from the general public and the large numbers of school children who pass through the museum's education centre each year.

The Adelaide Statistical Division also contains the South Australian Constitutional Museum, established in 1980 to highlight, preserve and interpret South Australia's political heritage. The museum is housed in the restored former Legislative Council building next to Parliament House on North Terrace, Adelaide.

A railway museum has also been established, at Mile End South. This museum, which is run by a voluntary organisation, maintains a large selection of locomotives, rolling-stock and railway artefacts for display.

### *National and Conservation Parks*

The major part of the Division, comprising the Adelaide plains, western foothills of the Mount Lofty Ranges and the eastern coast of Gulf St Vincent, is covered with urban development. On the edges of the urban area, on land not readily accessible to development, conservation and recreation parks have been established. Most of these ring the eastern edges of the city on the well timbered slopes of the Adelaide Hills Face Zone which marks the western foothills of the Mount Lofty Ranges. However, several parks conserve coastal areas along the city's western side taking in saltmarsh, mangrove, mudflats, sand-dunes, rocky cliffs and sandy beaches.

There are twelve conservation parks protecting areas of native flora and fauna and eleven recreation parks providing facilities for recreation within this Division. Some of these are discussed below.

#### *Morialta Conservation Park*

This park is a rugged area of approximately 374 hectares on the western slopes of the Mount Lofty Ranges and is located nine kilometres north-east of the Adelaide GPO. The park has excellent areas for picnics and an extensive network of walking trails which offer views of waterfalls in winter and spring. Rock climbing is a popular activity in the park. However, any person wishing to climb on the cliffs must be a member of an approved organisation and must also gain permission from the ranger staff.

Some of the most spectacular scenery of the Mount Lofty Ranges can be seen in the park, with tall waterfalls and deep gorges cut into the steep slopes, ridges and rounded hills. Fourth Creek which flows from its upper reaches in the Norton Summit—Ashton

area drops over three waterfalls within the park before meandering through the creek-flats of the western end. The only permanent water in Morialta is found in pools and artificial dams along the lower landscaped part of the creek.

There are many complex vegetation associations within the park, which provide excellent study material for students. The area includes open forest of stringybarks (*Eucalyptus baxteri*/*Eucalyptus obliqua*) and pink gums (*Eucalyptus fasciculosa*) on sandy soils.

More textured soils support South Australian blue gums (*Eucalyptus leucoxylon*), manna gum (*Eucalyptus viminalis*), drooping sheoak (*Allocasuarina verticillata*) and blackboys (*Xanthorrhoe quadrangulata*). Fourth Creek is lined by river red gums (*Eucalyptus camaldulensis*). The trees also form a 'parkland' in the picnic grounds. In spring a large variety of orchids are found in the understorey.

Animals typical of the Adelaide Hills are found there. These include Western Grey kangaroos (*Macropus fuliginosus*), echidnas (*Tachyglossus aculeatus*), yellow footed marsupial mouse (*Antechinus flavipes*), bush rats (*Rattus fuscipes*) and the common ringtail which makes its home in large hollow eucalypt trees. Fish, yabbies and frogs can also be seen along the creek.

#### *Black Hill Conservation Park*

Black Hill Conservation Park is situated approximately twelve kilometres north-east of Adelaide in the western foothills of the Mount Lofty Ranges. It covers some 679 hectares including Black Hill (which rises 465 metres above sea level) and comprises three areas; the nursery, the wildflower garden and natural bushland. Native plants from a variety of arid to aquatic areas can be observed in the wildflower garden. Native plant seedlings are on sale at the nursery which also provides advice and pamphlets on landscaping and care of native plants. A network of trails of varying lengths meander throughout the natural bushland area.

The park is characterised by rugged topography with steep hills and valleys which support a diversity of native vegetation and offer excellent views of the city and surrounding hills.

There are two basic vegetation types: stringybark (*Eucalyptus baxteri*) and pink gum (*Eucalyptus fasciculosa*) forest and scrub on quartzite. The other major association is South Australian blue gum (*Eucalyptus leucoxylon*) and river red gum (*Eucalyptus camaldulensis*) woodland and grassland on shales.

#### *Belair Recreation Park*

Originally established as 'The National Park' in 1891, this is one of the oldest national park areas in the world. The park covers 811 hectares with more than half reserved as Flora Areas to cater for those people interested in scientific studies, walking or natural history and to provide some degree of protection for the natural features.

Its classification and name was changed to Belair Recreation Park in 1972 because of the active recreational use which has developed throughout its history. There are kiosks, tennis courts, ovals, picnic areas, pavilions, walking trails, a playground area and other features to cater for recreational activities.

These are situated in the western section of the park where the terrain is gently undulating with a degraded natural flora of peppermint box (*Eucalyptus odorata*)/river red gum (*Eucalyptus camaldulensis*) open forest to woodland with numerous exotic tree species.

The areas reserved as flora areas are the eastern portions of the park where a Messmate stringybark (*Eucalyptus obliqua*), South Australian blue gum (*Eucalyptus leucoxylon*)/manna gum (*Eucalyptus viminalis*) and pink gum (*Eucalyptus fasciculosa*)

open forest association occurs over a sclerophyllous understorey. Six endangered plant species have been recorded in this park which also provides habitat for the threatened Scaly Thrush.

Included in the park is Old Government House which was built in 1859 as a summer residence for Governor Macdonnell on an area of land known as the Government Farm. Guided tours through the house, with its mid-Victorian furnishings, provide an insight into the lifestyle of South Australia's former gentry.

#### *Cleland Conservation Park*

Cleland Conservation Park, located nine kilometres east of Adelaide, has a dramatic and varied topography. This 949 hectare park, extending from the summit of Mount Lofty to the steep-sided gorge of Waterfall Gully, is characterised by long ridges, steep sided gullies with creeks, bogs, small waterfalls, a relatively flat plateau in the centre of the park which houses a native fauna zone, and the highest peak in the Mount Lofty Ranges.

A major attraction is the Native Fauna Zone, where kangaroos and emus roam freely. There are lakes for water birds, walk-through aviaries and small enclosures exhibiting native animals.

In addition to the Fauna Zone there are many attractive walking trails; part of the Heysen Trail passes through the park.

Plant communities are represented by stringybark associations which occupy nearly half the park and vary from open scrub to open forest, and smooth barked woodlands which occur on deeper soils in the western half.

Six endangered and twenty-two rare plant species occur in the park. *Eucalyptus rubida* open forest which is a rare plant alliance in South Australia, occurs in the north-eastern section.

At least eight native mammal species including the uncommon Short-nosed Bandicoot (*Isodon obesulus*) and 88 bird species have been recorded. A swampy area (Wilsons bog) contains one of only two known South Australian occurrences of *Todea barbara* (king fern). King ferns are a relic of a time when the Mount Lofty Ranges had a much wetter climate and are now restricted to a few of the remaining peat bogs in the higher rainfall areas of the Mount Lofty Ranges. This may also explain why there is a distinct race of Copperhead snakes (smaller and darker than in the South East) which occurs only in the central hills areas (including Cleland).

#### *Fort Glanville Conservation Park*

Fort Glanville stands as a monument to the early defence strategies of South Australia when the colony was thrown into panic in the 1870s by the threat of war between Britain and Russia.

The protection of the Adelaide coast against a possible Russian attack, with only a volunteer field force and absent British troops, was a matter of concern. Plans were drawn up for a comprehensive permanent defence system. The construction and completion of Fort Glanville in 1880 was the first step.

Constructed during the period 1878-80, the fort was a lunette or crescent-shaped earthworks, backed by 160 centimetre concrete and 60 centimetre retaining walls. Sand dunes afforded both camouflage and protection. The front and sides of the fort were protected by a ditch, with a canopier, while to the rear were the barracks and stockades. The rear defence walls were pierced with loop holes, which could be used for rifle fire in case of a land attack.

Two 10-inch guns provided the fort with formidable fire power, having a range of 6 500 yards (6 014 metres). The smaller 64 pounder guns, located on each flank, could engage

targets 5 000 yards (4 500 metres) away, and supported the larger guns. By 1889 however, the battery was superseded by the more modern breech loading artillery installed at Fort Largs.

Between 1880 and 1882 the fort was staffed on a temporary basis by the South Australian Volunteer Artillery who became the first regular force of the colony. With Fort Glanville as their base, their prime purpose was defence of the colony.

The National Parks and Wildlife Service, together with the Fort Glanville Historical Association and the South Australian Tourist Bureau, have undertaken to restore the fort as authentically as possible. Work has been carried out over a number of years and when completed Fort Glanville will be a unique museum presenting display and customs from colonial times.

The fort is opened between September and May, on the third Sunday of each month. Guides provide tours around the fort, while the volunteer military personnel recreate a nineteenth century atmosphere.

#### *Hallett Cove Conservation Park*

Hallett Cove Conservation Park is located on the eastern side of Gulf St Vincent, at the southern end of the Adelaide urban area. The park is relatively small comprising only fifty-one hectares and was acquired primarily as a scientific reserve to conserve its geological features which would otherwise have been lost during urban development.

The park retains a rugged natural beauty which derives from the combination of rocky coastal cliffs, a magnificently developed shore platform and sandy cover, deeply-eroded gullies dissecting multi-coloured sediments and pockets of stunted coastal vegetation.

Evidence of great geological change from as long as 600 million years ago is conserved within the park. In 1877 Professor Ralph Tate discovered the glacial pavements along the cliff-tops northward from Black Cliff at Hallett Cove. These features have since been recognised as the best record of Permian glaciation in Australia. The locality exhibits a remnant of widespread glaciation which once covered much of the State. Folded quartzites, siltstones and shales, predominantly purple in coloration, form excellent exposures along the coastal cliffs. A well-developed shore platform extends northward from Black Cliff for more than 3.5 kilometres. Here numerous sedimentary structures can be seen to perfection.

#### **Parks in Adelaide Statistical Division**

Conservation Parks	Area (Hectares)	Recreation Parks	Area (Hectares)
Cleland .....	949	Para Wirra .....	1 409
Black Hill .....	679	Belair .....	811
Port Gawler .....	433	Stuart Gorge .....	131
Morialta .....	374	Loftia .....	91
Montacute .....	196	Shepherds Hill .....	88
Horsnell Gully .....	132	Brownhill Creek .....	52
Torrens Island .....	72	Greenhill .....	27
Hallett Cove .....	51	Lenswood .....	17
Eurilla .....	8	The Elbow .....	15
Ferguson .....	8	Kingston Park .....	8
Fort Glanville .....	5	Windy Point .....	3
The Knoll .....	2		



### Aboriginal Heritage

The original inhabitants of the Adelaide Plains were known as the Kurna people. Although the group is frequently referred to as the 'Adelaide Tribe' their tribal area was much more extensive than the Adelaide Statistical Division.

The territory of the Kurna traditionally encompassed a variety of environmental zones and associated with these were widely varied flora and fauna. The regional variations as well as seasonal variation of food supplies provided the main focus for Aboriginal movement.

Evidence of Aboriginal culture can be found at campsites, quarries and painting sites and within myths which tell how the land, animals and plants were formed, with each component of the story being represented by geographical features. Four of these sites and the associated myths are discussed below.

#### *South Para Painting Sites*

Ochre painting sites still exist in many sheltered areas such as caves and rock overhangs which provide some protection from the weather. The paintings on the South Para were mainly executed in red ochre and in one cave, outlined in white. The paintings suggest that animals and their tracks were the main subjects. Unfortunately, the interpretation of the paintings is difficult. The deposits on the floor of the caves also show evidence of occupancy by Aboriginal people and include animal bones.

#### *Tjilbruke Mythology*

One of the principal Kurna myths tells of the formation of the many coastal springs on the Fleurieu Peninsula. The mythical being credited with the creation of these water supplies was named Tjilbruke.

One day Tjilbruke heard that his sister's son Kulutuwi had been killed near the Sturt River. When he arrived at the scene he found that the young boy had broken a strict taboo which forbade him to kill emus. As a result he had been struck down at the exact moment he raked the emu from the fire.

From the spring on the beach at Kingston Park, Tjilbruke carried his nephew in mourning along the coast to Cape Jervis where he displayed the body to the spirits of the dead on Kangaroo Island. At each of his camps on the way his tears became the springs and waterholes of the Kurna coastal hunting grounds. The body of Kulutuwi was later lodged in a cave near Rapid Bay.

The springs created during his Dreaming, with the associated campsites are well known.

#### *Moana Sand Dunes*

The sand dunes at Moana have produced evidence of intensive use by Aboriginal people for over 6 000 years. The site includes part of a stone arrangement, areas of stone artifacts and compacted shell and food remains (middens). Hearths, used for cooking, have also been found. The natural erosion, destruction of vegetation and commercial sand mining of the dunes has, unfortunately, had a detrimental effect on the stability of the sand and therefore the preservation of the sites.

#### *Ochre Cove*

Red ochre from this site was used for decorating weapons and utensils as well as for ceremonial purposes. In the vicinity of the red ochre there are beds of white clay used for coating the head during mourning. The ochres were also traded with other groups of people. As well as the importance of the ochre, a nearby spring is one of Tjilbruke's camping places. The Aboriginal name for Ochre Cove is Potatang.

### **Health Facilities**

There are fourteen recognised hospitals (formerly public hospitals) in the Adelaide Statistical Division; these hospitals are under the supervision of the South Australian Health Commission. The main recognised hospitals are the Royal Adelaide Hospital, the Queen Elizabeth Hospital, Modbury Hospital, Queen Victoria Hospital, the Adelaide Children's Hospital, Flinders Medical Centre and the Lyall McEwin Health Service.

In addition there are approximately thirty private hospitals and one hospital administered by the Commonwealth. There are several large private hospitals in the Division including Calvary Hospital, the Memorial Hospital and St Andrews Hospital, all of which are run by denominational bodies. There are also approximately a hundred nursing homes within the Division.

The Drug and Alcohol Services Council controls a number of facilities for the treatment of alcoholism and other addictions. Centres operate at Parkside, North Adelaide, Norwood and Joslin.

The Child, Adolescent and Family Health Service also provides services to the child health centres, kindergartens, schools and health installations.

The Red Cross, Royal District Nursing Society and the St John Council for South Australia offer a number of services at various locations within the Division.

### **Welfare Facilities**

The Department for Community Welfare promotes the welfare of the community and of individuals, families and groups within the community. The Department has a central office in Adelaide which provides administrative and resource support, four regional offices (Salisbury, Port Adelaide, Kent Town and Glandore) and forty-five local offices. In addition there are admission units, homes and cottages, community units, training and assessment centres and project centres located throughout the Adelaide Statistical Division. The Crisis Care Service offers an after hours telephone service for clients and members of the public in distress.

The Department provides social work counselling and support services to individuals, families and groups. It also provides legal advice and counselling on family maintenance, budget advice, rehousing assistance, residential care for children, adoptions, services for the aged and various youth services.

### **Water Supplies**

Before 1860 the people of Adelaide relied for their water supplies on rainwater tanks or carting from the River Torrens and other local streams. In that year, Thorndon Park Reservoir was completed and people received their first reticulated water supply.

Continued rapid growth soon necessitated the development of other water resources, and now the metropolitan area is served by nine reservoirs. Four main catchment areas, South Para, Torrens, Onkaparinga and Myponga, have been developed in the Mount Lofty Ranges for water supplies.

These catchments are small and the rainfall light and, less than 100 years after the construction of the reservoir at Thorndon Park, further augmentation of the supply system was necessary. In 1954 the Mannum-Adelaide Pipeline was completed, supplementing the Torrens System. The Murray Bridge-Onkaparinga Pipeline, commissioned in 1973, augments the Onkaparinga System. Since their construction, the pipelines have supplied upwards of forty per cent of the water requirements of the metropolitan area. In addition these pipelines supply country areas adjacent to their routes.

The Metropolitan Water Supply System is now a complex one with the reservoirs and pipelines organised into four inter-connected systems which, with some 7 700 kilometres

of mains, serve about 974 000 people as well as providing water for industrial and recreational use.

The northern sector of the Adelaide Statistical Division from Gawler to Salisbury/Para Hills, including the local government areas of Elizabeth, Light and the central and eastern areas of Munno Para, is served by the Barossa Reservoir, part of the South Para System, and the Little Para Reservoir which is included in the Torrens System. The Barossa Reservoir is an off-stream storage, fed *via* an aqueduct from the South Para River. Water from the reservoir has been filtered since late 1980, and another filtration plant at Little Para Reservoir (which serves as a balancing storage for River Murray water from the Mannum-Adelaide Pipeline) was opened in November 1984. All water supplied to the region is now filtered.

The water filtration plant at Anstey Hill, which treats water entering the distribution system from the Mannum-Adelaide Pipeline, supplies a wide area north and east of the City of Adelaide, including the local government area of Tea Tree Gully and parts of Enfield, Campbelltown, Payneham, Burnside and St Peters.

Several other local government areas surrounding the city are supplied from Hope Valley Water Filtration Plant, commissioned in 1977 and the first to serve the metropolitan region. These include Hindmarsh, Prospect and Walkerville and part of Payneham, St Peters, Woodville, Burnside, Campbelltown, Enfield, Kensington and Norwood. The Hope Valley System also extends to Torrens Island, and forms part of the supply of Port Adelaide.

By far the most extensive sector of the Division is supplied from the reservoir at Happy Valley, a vital part of the Onkaparinga system. An off-stream storage, it is fed *via* a diversion weir and tunnel, from the Onkaparinga River at Clarendon. Distribution from the reservoir extends to Port Adelaide, and includes the Cities of Adelaide, Henley and Grange, Glenelg, Brighton, West Torrens, Marion, Thebarton, Unley and parts of Woodville, Burnside, Kensington and Norwood, Happy Valley, Noarlunga and the low lying areas of Mitcham. A water filtration plant is currently under construction at Happy Valley Reservoir. It will be commissioned in two stages, the first in 1988, the full plant in 1990.

The hills areas of Mitcham and parts of Stirling are supplied from Mount Bold Reservoir and the Onkaparinga System, *via* the Pumping Station at Clarendon Weir, while some of the higher areas of Meadows and Stirling are fed directly from the Murray Bridge—Onkaparinga Pipeline. The Mannum-Adelaide Pipeline further north supplies water to the Gumeracha area.

The most southerly areas of the Adelaide Statistical Division—Willunga and parts of Noarlunga—are supplied from the Myponga Reservoir.

However, the area served from any source cannot be regarded as fixed as the reticulation system has a high degree of flexibility and the areas served by various sources depend on relative holdings of reservoirs, demand and the quality of water from the reservoirs and pipelines.

### Electricity Supply

The potential of electricity as an illuminant was demonstrated in 1867 by Charles Todd, Superintendent of Telegraphs, who operated a searchlight from the Post Office tower in King William Street. This light shone down King William Street as far as the entrance to Government House.

From 1880-1900 some private generating plants were installed within the City of Adelaide and elsewhere, but these installations were used mainly to provide lighting for hotels and shops and for the occasional lamp in the street outside such premises.

The first power station for the public supply was at Nile Street, Port Adelaide. Here

three boilers and generating plant with a combined capacity of 150 kW were installed. The streets of Port Adelaide were lit and a supply provided to residents and shopkeepers within the area by early 1899.

Following a poll of ratepayers which agreed that public supply electricity should be available within the City of Adelaide, the first power station was installed in Devonshire Place in 1899. This was followed by the building and commissioning of the Grenfell Street Power House towards the end of 1901 with a capacity of 560 kW. The town mains supplied water for this station which was circulated over high cooling towers.

In the early years of development, street lighting was the predominant use for the electricity supply. By 1910 there were fifteen Councils in the metropolitan area using electricity for this purpose.

Osborne Power Station was commissioned in 1923 with an initial installed capacity of 5000 kW and this station, with an abundance of cooling water available from the Port River, became the State's principal power station. It supplied the metropolitan and some country areas until the commissioning of the first unit at Playford Power Station, Port Augusta in 1954.

The Grenfell Street Power House was closed towards the end of 1925, and Osborne 'A' Power Station closed in 1968.

The Electricity Trust of South Australia now operates three power stations within the region. Torrens Island has an installed capacity of 1 280 MW, Osborne 'B' 240 MW, and the Dry Creek Gas Turbine station on Grand Junction Road has a capacity of 156 MW. The System Control Centre in Adelaide co-ordinates transmission and distribution switching operations, the scheduling of power station maintenance and the economic operation of generating plant.

The head office of the Electricity Trust is situated at Eastwood and is the centre for the engineering, corporate planning, secretarial, human resources, administration and generation operations divisions of the Trust.

At least 400 000 customers are within the region and the Electricity Trust has area headquarters at Mile End, Magill, Angle Park and Elizabeth. Line personnel maintain the transmission and distribution system within the region from twelve depots.

### Rural Industries

The rural content of the Adelaide Statistical Division is approximately 538 square kilometres or 28 per cent of the region.

The table below shows the decline in area of rural establishments over the past four years, as land was developed for residential, educational and recreational purposes and the metropolitan area expanded.

Average Size of Agricultural Establishments, Adelaide Statistical Division  
(Hectares)

Local Government Area	1980	1981	1982	1983	1984
Adelaide (C) .....	—	15	—	—	—
Brighton (C) .....	—	—	—	—	1
Burnside (C) .....	64	57	57	66	128
Campbelltown (C) .....	92	91	82	72	90
East Torrens (DC) .....	5 219	4 812	4 569	3 524	3 382
Elizabeth (C) .....	—	3	—	1	1
Enfield (C) .....	593	554	429	714	296
Gawler (M) .....	86	129	34	299	308

**Average Size of Agricultural Establishments, Adelaide Statistical Division  
(Hectares) (continued)**

Local Government Area	1980	1981	1982	1983	1984
Gumeracha (DC) (part) .....	1 806	1 836	1 592	1 603	1 483
Happy Valley (C) .....	—	—	—	—	5 714
Light (DC) (part) .....	—	4	—	4	4
Marion (C) .....	1 105	1 103	1 098	1 136	1 091
Meadows (DC) (part) .....	7 020	6 575	6 470	6 594	—
Mitcham (C) .....	1 324	1 283	1 119	1 210	1 041
Munno Para (DC) .....	16 712	16 888	16 028	14 850	14 684
Noarlunga (C) .....	8 467	7 841	7 284	6 410	6 592
Onkaparinga (DC) (part) .....	221	192	204	216	206
Payneham (C) .....	2	3	2	3	3
Port Adelaide (C) .....	—	—	—	—	1
Prospect (C) .....	—	—	—	1	1
St Peters (C) .....	—	—	—	1	1
Salisbury (C) .....	5 417	5 534	4 636	4 197	4 091
Stirling (DC) .....	1 813	1 613	1 324	1 499	1 050
Tea Tree Gully (C) .....	2 403	2 179	1 871	1 690	1 216
Unley (C) .....	—	4	—	3	3
West Torrens (C) .....	24	25	24	32	27
Willunga (DC) (part) .....	15 510	14 535	13 799	13 172	12 335
Woodville (C) .....	155	146	131	127	133
<b>Average area .....</b>	<b>68 033</b>	<b>65 422</b>	<b>60 753</b>	<b>57 424</b>	<b>53 881</b>

(C) Municipality with city status (DC) District Council (M) Municipality

### Crops

The main crops, wheat and barley represent only a small proportion of the State totals, as the tables indicate.

### Wheat for Grain, Adelaide Statistical Division

Particulars	Unit	1980	1981	1982	1983	1984
Establishments .....	No.	62	59	52	54	59
Area sown .....	hectares	1 811	2 095	1 595	1 465	2 004
Production .....	tonnes	2 269	3 082	2 282	1 358	4 232
Average yield per hectare .....	tonnes	1.25	1.47	1.43	0.93	2.11
Production as percentage of State .....	per cent	0.09	0.19	0.13	0.20	0.15

### Barley for Grain, Adelaide Statistical Division

Particulars	Unit	1980	1981	1982	1983	1984
Establishments .....	No.	83	85	89	75	76
Area sown .....	hectares	3 889	4 042	4 081	3 341	3 709
Production .....	tonnes	5 910	6 620	6 062	3 381	6 495
Average yield per hectare .....	tonnes	1.52	1.64	1.48	1.01	1.75
Production as percentage of State .....	per cent	0.38	0.57	0.49	0.50	0.36

*Sheep*

The sheep flock of 58 901 represents 0.36 per cent of total sheep numbers of the State at 31 March 1984.

The following tables show sheep numbers, wool clip and lambing as recorded for this Division.

**Sheep Numbers, Adelaide Statistical Division**

Particulars	1980	1981	1982	1983	1984
Rams .....	1 069	1 108	912	1 011	1 032
Ewes: Breeding .....	35 203	35 312	30 415	33 416	31 445
Other .....	4 542	4 931	8 311	4 782	2 732
Wethers .....	10 891	19 870	12 085	13 743	10 673
Lambs .....	12 368	15 060	12 171	12 401	13 019
Total .....	64 073	76 281	63 894	65 353	58 901
Total sheep and lambs as a percentage of State .....	0.40	0.44	0.38	0.42	0.36

**Sheep and Lambs Shorn, Wool Clip and Average Weight per Fleece, Adelaide**

Particulars	Unit	1980	1981	1982	1983	1984
Sheep and lambs shorn ....	'000	133	104	114	61	59
Wool clip .....	'000 kg	413	399	427	297	298
Average per fleece .....	kg	3.10	3.82	3.73	4.87	5.08
Wool clip share of State total .....	per cent	0.45	0.40	0.43	0.31	0.29

**Lambing, Adelaide**

Particulars	1980	1981	1982	1983	1984
Ewes mated .....	29 692	31 674	30 485	30 387	30 490
Lambs marked .....	26 442	27 383	25 617	26 344	26 914
Lambing percentage (a) .....	89.0	86.4	84.0	86.7	88.3
State lambing percentages (a) .....	83.2	81.7	77.6	77.1	82.1

(a) Percentage of lambs marked to ewes mated.

*Cattle*

The total number of cattle and calves in the Division in 1984 was 13 018 which represents 1.60 per cent of the State total. The tables show the figures for milk and meat cattle.

**Cattle for Milk Production, Adelaide Statistical Division**

Particulars	1980	1981	1982	1983	1984
Bulls .....	95	84	77	102	83
Cows .....	3 499	3 469	3 864	2 999	3 294
Heifers .....	923	913	842	2 219	1 143
Calves .....	715	906	725	666	702
Total (a) .....	5 354	5 488	4 752	6 080	5 311
Dairy cattle as a percentage of State total .....	3.41	3.43	3.01	3.84	3.28

(a) Includes house cows.

**Cattle for Meat Production, Adelaide Statistical Division**

Particulars	1980	1981	1982	1983	1984
Bulls .....	310	322	272	275	266
Cows .....	5 833	6 239	5 906	4 761	4 362
Calves .....	3 087	3 213	3 141	2 927	2 223
Total (a) .....	10 191	11 932	10 459	9 086	7 707
Meat cattle as percentage of State total .....	1.12	1.28	1.22	1.58	0.95

(a) Includes other cattle for meat production.

**Viticulture**

The Adelaide Division contains 11.0 per cent of the State total of the area of bearing grape vines. White grapes for winemaking contributed 7 526 tonnes, which was 3.9 per cent of the State total in 1984, while red grapes totalled 10 884 tonnes, or 11.4 per cent.

The Division also contributes to vegetable production. A total of 501 establishments with an area of 2 443 hectares, accounts for 30.4 per cent of the State total of commercially produced vegetables.

**Selected Agricultural Statistics, Adelaide and South Australia, 1983-84**

Particulars	Unit	Adelaide	South Australia	Per Cent
Rural establishments .....	number	1 660	19 923	8.30
Area of establishment .....	hectares	53 881	62 062 616	0.08
Sown pastures .....	hectares	12 649	3 526 705	0.36
Wheat, total area .....	hectares	2 231	1 575 749	0.14
Barley, total area .....	hectares	3 912	1 117 984	0.35
Oats, total area .....	hectares	1 674	227 870	0.73
Field peas, total area .....	hectares	648	45 106	1.44
Hay sold .....	tonnes	5 449	91 434	5.96
Sheep numbers .....	number	58 901	16 367 521	0.36
Wool shorn .....	tonnes	297 998	101 512 951	0.29
Cattle .....	number	13 018	812 587	1.60
Pigs .....	number	4 885	416 503	1.17

## Selected Agricultural Statistics, Adelaide and South Australia, 1983-84 (continued)

Particulars	Unit	Adelaide	South Australia	Per Cent
Horses .....	number	1 099	22 125	4.97
Vegetables: Potatoes .....	tonnes	26 597	120 748	22.03
Cabbage .....	tonnes	6 503	7 784	83.54
Celery .....	kg	5 072 268	5 808 268	87.32
Cucumbers .....	kg	1 088 317	2 420 317	44.96
Mushrooms .....	kg	625 909	661 284	94.65
Onions .....	tonnes	52 319	78 475	66.67

**Manufacturing**

At 30 June 1983 there were 1 687 manufacturing establishments in the Adelaide Statistical Division employing 76 040 persons, with a turnover of \$5 017.7 million during 1982-83.

**Manufacturing Establishments: Summary of Operations**  
**Adelaide Statistical Division and South Australia, 1982-83 <sup>(a)</sup>**

Particulars	Unit	Adelaide	South Australia	Proportion Per Cent
Number of establishments .....	number	1 687	2 099	80.4
Employment (b):				
Males .....	number	58 746	74 843	78.5
Females .....	number	17 294	21 063	82.1
Persons .....	number	76 040	95 906	79.3
Wages and salaries (c) .....	\$'000	1 186 786	1 502 324	79.0
Turnover .....	\$'000	5 017 697	6 707 520	74.8
Stocks:				
Opening .....	\$'000	720 737	1 128 802	63.8
Closing .....	\$'000	745 217	1 170 851	63.6
Purchases, transfers in .....	\$'000	2 901 153	4 040 940	71.8
Value added .....	\$'000	2 141 024	2 708 629	79.0
Fixed capital expenditure less disposals .....	\$'000	173 234	219 653	78.9

(a) Excludes single establishment enterprises fewer than four persons.

(b) Includes working proprietors.

(c) Excludes drawings of working proprietors.

**Transport and Communications****Road**

Adelaide is the focal point for many interstate and intrastate highways. The Highways Department is responsible under the Highways Act, 1926-1984 for main roads. Local government authorities are responsible for minor roads within their areas, and may also undertake roadworks in their areas on behalf of the Highways Department from which they receive reimbursement of expenditure incurred.

**Rail**

Adelaide is the headquarters of the Australian National Railways Commission which, trading as 'AN', operates all the country rail systems in South Australia with the exception of two small privately owned railways.

From Adelaide, railways run to Victoria, New South Wales (and thence to Queensland), Western Australia and Alice Springs in the Northern Territory.



### Air

Adelaide Airport, situated about six kilometres from the city centre, has been an international airport since November 1982.

Domestic scheduled flights through Adelaide provide regular links with interstate capitals, the Northern Territory and the Australian Capital Territory.

Adelaide Airport also is a terminal for intrastate air services operated by Airlines of South Australia and other approved commuter operators.

### Sea

The Port of Adelaide is the main shipping port in the Adelaide Statistical Division. It consists of an inner harbour, No. 27 Bulk Grain Berth, Osborne and Outer Harbor.

In 1983-84 the Port of Adelaide handled 917 vessels with gross tonnage over 8 000 000 tons. Import cargo of 1 631 062 tonnes and export cargo of 1 683 760 tonnes was almost twenty-one per cent of total cargo handled at all South Australian ports.

The inner harbour loaded 217 107 tonnes of bagged grain and twelve vessels were loaded with 359 880 live sheep. The Bulk Handling Plant at Osborne handled sixteen per cent less cargo than in the previous year due largely to the cessation of coke shipments from Whyalla, which are now road hauled, but imports of phosphate rock increased by sixteen per cent. The No. 27 Bulk Grain Berth loaded thirty-one vessels with 374 208 tonnes of wheat, 156 785 tonnes of barley and 6 173 tonnes of oats following an excellent grain season.

The Outer Harbor's modern container facilities at No. 6 Berth handled most of the container cargo loaded and discharged at South Australian ports. The world's largest live sheep carriers call regularly, catering for the Middle East trade. Thirty-one vessels loaded 1 737 645 live sheep and 2 797 cattle and goats and accounted for ten per cent of overseas shipping in 1983-84.

Car carriers which use both harbours accounted for twenty-four per cent of overseas shipping in 1983-84. Efforts continue to be made to promote the Port of Adelaide as a regular cruise port and during the period March 1984 to March 1985 a significant increase in cruise vessels using the overseas passenger terminal at Outer Harbour occurred. A return call by *Oriana* in November 1984 was followed by *Queen Elizabeth II* in February 1985 and *Canberra* in March 1985.

Port Stanvac, a private oil refinery port about twenty-five kilometres from Adelaide imports mainly crude petroleum and exports refined petroleum. In 1983-84 eighty vessels with gross tonnage over 2 000 000 tons were handled. Import cargo of 2 276 349 tonnes and export cargo of 804 580 tonnes approximated twenty per cent of total cargo handled at all South Australian ports.

The Greater Port of Adelaide Development Plan, released in 1949, included many port development projects over the ensuing fifty years. One project currently coming into prominence, is the Pelican Point project where 450 hectares of vacant land are being prepared for sale as industrial sites. The first release of thirteen hectares near Outer Harbor was made in 1983-84, and a broader marketing effort in conjunction with the Department of State Development occurred in 1984-85. The purpose is to bring new port related industry to the area on land which previously had been unused.

### Public Transport

The State Transport Authority operates 965 kilometres of bus routes, eleven kilometres of electric tram routes and 153 kilometres of suburban railways in the Adelaide Statistical Division.

The Northeast Busway, which will use the guided bus technique developed in West

Germany (O-Bahn), is under construction. Operations are scheduled to commence in February 1986 between Park Terrace, Gilberton and Darley Road, Paradise. The first section between OG and Darley Roads, 2.6 kilometres in length, was completed and tested in July 1983.

### *Motor Vehicles*

At 30 September 1982 there were an estimated 502 000 motor vehicles registered at addresses within the Adelaide Statistical Division. This represented 67 per cent of the total registered motor vehicles in South Australia and comprised 427 000 motor cars and station wagons; 57 000 commercial vehicles and 18 000 motor cycles.

### *Postal and Telecommunications*

The Adelaide Statistical Division is divided into 129 postcode areas for postal purposes. There are more than 230 post offices providing postal services and continuous telephone services and International Subscriber Dialling and Subscriber Trunk Dialling are also available.

Television services are provided by one national and three commercial television stations located in Adelaide. There are seven AM (amplitude modulation) and six FM (frequency modulation) radio stations operating in Adelaide. The seven AM stations comprise two national, four commercial and one public, while the six FM stations comprise one national, one commercial and four public radio stations.

### *Retail Trade*

At 30 June 1980 there were 9 028 retail establishments and 2 083 selected service establishments operating in the Adelaide Statistical Division. The number of retail and selected service establishments represented 68.6 per cent of the State total and 76.8 per cent of total turnover.

#### **Retail and Selected Service Establishments <sup>(a)</sup>**

Summary of Operations by Industry Group, Adelaide Statistical Division, 1979-80

Industry Group	Establishments at 30 June	Turnover (b)
		\$'000
Department and general stores .....	39	428 747
Clothing, fabrics and furniture stores .....	1 317	244 425
Household appliance and hardware stores .....	743	218 257
Motor vehicle dealers; petrol and tyre retailers .....	1 995	1 087 839
Food stores .....	3 110	822 416
Other retailers .....	1 824	216 052
<b>Total retail establishments .....</b>	<b>9 028</b>	<b>3 017 736</b>
Motion picture theatres .....	36	13 126
Restaurants, hotels and accommodation .....	813	269 161
Licensed clubs .....	160	25 851
Laundries and dry cleaners .....	236	23 178
Hairdressers, beauty salons .....	838	27 892
<b>Total selected service establishments .....</b>	<b>2 083</b>	<b>359 209</b>
<b>Total retail and selected service establishments ..</b>	<b>11 111</b>	<b>3 376 945</b>

(a) Excludes all bread and milk vendors. (b) Sales of goods (retail and wholesale) and all other operating revenue.

## Tourism

The Adelaide Statistical Division offers visitors a diversity of scenic attractions and recreational activities. The area incorporates the city itself (a major attraction), the sheltered suburban and southern beaches of the gulf waters and the Adelaide Hills surrounding the city from the north to the southern coast. The rolling hills of the southern Mt Lofty Ranges, which provide ideal grape growing conditions, contain the wine producing region known as Southern Vales. A brief description of each area follows.

### *Adelaide*

The city is a well laid out retail and commercial centre planned in a square, with a surrounding belt of parklands. Adjacent to the city is the suburb of North Adelaide, well known for its old style residential architecture and boutiques and restaurants.

Visitor attractions in the city area include the Adelaide Festival Centre, a modern and architecturally unusual complex of three theatres, a number of restaurants and bistros, and convention facilities. The centre is located within the heart of the city area and has a pleasant parkland aspect overlooking the River Torrens. The Constitutional Museum, South Australia's original Parliament House, provides visitors with the opportunity to step back into history through participation in a sitting of the House, together with audio visual presentations taking them from the landing of the HMS *Buffalo* to the present day.

Rundle Mall is the centre of the city's retail shopping area, and it has many adjacent arcades, taverns and restaurants. Nearby Hindley Street offers cosmopolitan restaurants.

The Adelaide Town Hall, Treasury buildings, General Post Office and other original city buildings provide pleasing examples of nineteenth century architecture.

Accommodation available in the city areas includes renovated old style hotels, modern motels and a number of international standard hotels, the most recent of which is the Hilton International Adelaide. Its opening and that of the Adelaide International Airport in late 1982 has upgraded Adelaide's status as a destination for international visitors and businessmen. There are over 1 700 self-contained rooms in the Adelaide City Council area.

Other significant attractions in central Adelaide include the Museum and Art Gallery, located on tree-lined North Terrace and housed in magnificent old buildings. The Botanic Garden and Zoo are located in parklands on the city's edge. Produce markets and Sunday markets are popular.

Recreational activities and spectator sports are provided within the city area and parklands belt. There are two golf courses, the Olympic standard Adelaide Swimming Centre, bowling, archery, athletic, rowing and cricket clubs. International Test Cricket and Australian football are played at the Adelaide Oval and international tennis at Memorial Drive tennis courts, adjacent to the River Torrens.

The biennial Adelaide Festival of Arts is centered at the Festival Theatre, with associated drama music and art exhibitions being held at many small theatres and galleries in the city and North Adelaide.

### *Suburban and South Coast Beaches*

The suburban coastline from Seacliff in the south to North Haven provides many kilometres of sandy swimming beaches.

The seaside suburb of Glenelg has considerable shopping, entertainment, recreational and catering facilities. It is a popular area for visitors, with a high incidence of self-catering holiday flat accommodation. Excellent caravan park facilities are provided at West Beach in an area development which incorporates two parks, one of which offers

on-site caravan hire (with *en suite* facilities), the Marineland aquarium, holiday units, a restaurant and a golf course. The Patawalonga Boat Haven at Glenelg is a sheltered waterway and marina suited to water sports.

Further south, more beaches are to be found. Christies Beach, Port Noarlunga, Moana, Aldinga and Sellicks Beach are set amongst headlands and cliffs, and provide opportunities for scuba diving in aquatic reserves, boating, fishing and surfing.

#### *The Adelaide Hills*

The Mount Lofty Ranges, skirting the city from the north to the southern coastline offer visitors a wide variety of landscape, scenic beauty, and history.

There are conservation parks, quaint old hotels, restaurants, art and craft galleries, lookouts, picnic areas, market gardens, produce sales, wineries, recreation reserves, gum trees, waterfalls, creeks and forests.

In the Autumn the trees in the Adelaide Hills provide a pleasing spectacle of colour.

Visitor attractions include the Birdwood Mill Museum, which incorporates a significant collection of vintage vehicles; the Big Rocking Horse and Toy Factory at Gumeracha; a Trout Farm, and the Mount Lofty and Wittunga Botanic Gardens.

The Cleland Conservation Park is a wildlife park of high appeal to international visitors. Native animals and birds range within a large enclosure and visitor access to most species is possible.

Tourist developments such as the Old Clarendon complex provide visitors with a wide range of attractions and activities. Its facilities include accommodation, restaurants, convention areas, an art gallery, craft sales, a winery and tasting area, and an old style baker's shop.

#### *The Southern Vales*

From Clarendon to McLaren Vale lies the wine producing area known as the Southern Vales. The area is a comfortable day trip from the city and is *en route* to the Southern Fleurieu Peninsula.

There are currently forty-eight wineries operating in the district, the largest number in any of the State's wine producing areas.

Each of the wineries is open for tastings and sales and a number have incorporated art galleries, craft sales and areas for catering.

#### *Tourist Accommodation*

At 30 June 1984 there were 106 motels and licensed hotels in the Adelaide Statistical Division providing 3 698 rooms with (predominately) private facilities.

At the same time there were 17 caravan parks providing 1 580 powered sites, 332 unpowered sites, 274 on-site caravans and 22 cabins. There were also over 300 holiday flats available for rental.

## **APPENDIX A**

# **STATISTICAL SUMMARY**

In the next twenty pages, a historical summary of some of the more important statistics relating to South Australia is shown. This is intended to present a general picture of the development of the State. Naturally the range of statistics available for the early years of the colony is very limited, and in addition it is not always possible to achieve perfect comparability in presenting details covering a period in excess of 140 years. Generally, all series on each page relate to either financial or calendar years but some financial year series have been included on pages which contain information shown in calendar years.

The first year shown on each page is the earliest for which any series on that page is available. Blanks at the top of some columns indicate that information relating to these particular series either was not collected or is not available for these early years, or is not available on a basis comparable to more recent statistics.

All major breaks in series are covered by footnotes, but minor changes are not so recorded, and the statistics should be interpreted with this in mind. An example can be quoted from the table on deaths from principal causes where comparability is affected somewhat by changes in classification, particularly in 1950, but no footnote to this effect has been included.

The following standard symbols have been used throughout the summary:

<i>n.a.</i>	not collected, not available for publication
—	nil
<i>p</i>	preliminary information subject to revision
<i>n.y.a.</i>	not yet available
———	break in continuity of figures
. .	not applicable

POPULATION and DEMOGRAPHY <sup>(a)</sup>

Year	Population Estimate at 31 Dec.			Annual Population Growth			
	Males	Females	Persons	Recorded Natural Increase (b)	Rate of Natural Increase (c)	Total Increase	Rate of Population Growth
							Per cent
1836 .....	309	237	546			546	
1841 .....	8 755	6 730	15 485			855	5.84
1846 .....	14 711	11 182	25 893	577	22.29	3 433	15.29
1851 .....	37 321	29 217	66 538	1 786	26.85	2 838	4.46
1856 .....	56 264	51 622	107 886	3 341	30.97	10 499	10.78
1861 .....	67 409	63 403	130 812	3 589	28.00	5 230	4.17
1866 .....	88 024	80 883	168 907	4 029	24.39	7 430	4.60
1871 .....	97 019	91 625	188 644	4 704	25.21	4 098	2.22
1876 .....	116 894	107 666	224 560	4 674	21.51	14 484	6.89
1881 .....	152 453	133 518	285 971	6 696	23.81	9 578	3.47
1886 .....	160 814	145 896	306 710	6 943	22.54	-2 603	-0.84
1891 .....	168 826	155 895	324 721	6 526	20.23	5 774	1.81
1896 .....	179 024	173 043	352 067	5 974	16.95	99	0.03
1901 .....	(d)180 440	(d)178 890	(d)359 330	(d)5 105	14.29	(d)2 080	0.58
1906 .....	184 803	181 710	366 513	5 049	13.90	3 892	1.07
1911 .....	214 061	205 331	419 392	7 019	17.05	12 530	3.08
1916(e) .....	212 585	229 253	441 838	6 780	15.35	-4 147	-0.93
1921 .....	251 170	250 572	501 742	6 992	14.07	10 736	2.19
1926 .....	285 013	275 912	560 925	6 606	11.92	13 877	2.54
1931 .....	289 397	287 682	577 079	4 191	7.28	2 612	0.45
1936 .....	294 835	294 935	589 770	3 447	5.86	3 008	0.51
1941(e) .....	301 645	304 721	606 366	4 677	7.78	7 310	1.22
1946(e) .....	317 238	323 180	640 418	9 352	14.72	9 536	1.51
1951 .....	375 188	368 597	743 785	10 279	14.03	20 942	2.90
1956 .....	436 807	425 145	861 952	11 371	13.40	27 291	3.27
1961 .....	494 600	484 800	979 400	14 584	15.03	22 400	2.68
1964 .....	529 100	522 900	1 052 000	12 002	11.57	29 600	2.89
1965 .....	544 300	538 700	1 083 000	12 146	11.38	31 000	2.95
1966 .....	554 000	549 800	1 103 700	11 017	10.07	20 700	1.92
1967 .....	559 300	556 700	1 115 900	11 315	10.19	12 200	1.10
1968 .....	566 700	565 400	1 132 100	11 291	10.06	16 200	1.45
1969 .....	574 700	574 700	1 149 400	12 640	11.09	17 200	1.52
1970 .....	584 400	585 900	1 170 200	12 479	10.77	20 900	1.81
1971 .....	602 000	606 700	1 208 700				
1972 .....	608 800	613 400	1 222 100	12 020	9.89	13 400	1.10
1973 .....	615 700	619 900	1 235 600	10 474	8.53	13 400	1.09
1974 .....	627 700	632 000	1 259 800	9 906	7.97	(f)24 200	1.95
1975 .....	633 200	637 500	1 270 700	9 958	7.87	10 900	0.86
1976 .....	637 800	642 300	1 280 200	8 902	6.98	9 500	0.75
1977 .....	643 200	649 100	1 292 300	9 406	7.31	12 100	0.94
1978 .....	645 400	653 200	1 298 600	8 781	6.78	6 300	0.49
1979 .....	648 200	656 400	1 304 600	8 753	6.73	6 000	0.46
1980 .....	651 600	661 100	1 312 600	8 861	6.77	8 000	0.61
1981 .....	656 100	667 800	1 323 900	9 550	7.24	11 300	0.86
1982 .....	661 100	673 300	1 334 400	8 754	6.59	10 500	0.79
1983 p .....	667 300	679 700	1 347 000	9 979	7.41	12 600	0.94

(a) Figures before January 1962 exclude full-blood Aborigines. Figures from 1971 are compiled on the basis of estimated resident population. An information paper entitled *Population Estimates: An Outline of the New Conceptual Basis of ABS Population Estimates* (3216-0) provides details of the conceptual changes. (b) Births and deaths of full-blood Aborigines, where identified in registration, have been excluded from natural increase figures before 1 January 1962. (c) Excess of births over deaths per 1 000 of mean population: from 1971 mean estimated resident population. (d) Includes Northern Territory before 1901. (e) During the 1914-18 War, defence personnel leaving the State were treated as departures, but during the 1939-45 War they were retained in the population, and troops of other States and countries were excluded. (f) Effect of Cyclone Tracy.

## DEMOGRAPHY

Year	Live Births		Infant Deaths (a)		Deaths		Rates from Principal Causes (b)		
	Number	Rate (b)	Number	Rate (c)	Number	Rate (b)			
							Diseases of the Heart	Cancer	Tuberculosis
1846	937	36.19			360	14.02			
1851	2 759	41.47	539	195.36	973	14.62			
1856	4 488	41.60	610	135.92	1 147	10.63		0.05	0.98
1861	5 551	43.30	1 064	191.68	1 962	15.30		0.08	1.25
1866	6 782	41.06	1 385	204.22	2 753	16.67		0.16	1.25
1871	7 082	37.95	851	120.16	2 378	12.74		0.18	1.05
1876	8 224	37.84	1 228	149.32	3 550	16.34		0.35	1.22
1881	10 708	38.08	1 364	127.38	4 012	14.27		0.32	1.16
1886	11 177	36.29	1 409	126.06	4 234	13.75		0.34	1.34
1891	10 737	33.36	976	90.77	4 211	13.08		0.49	1.31
1896	10 012	28.44	1 015	101.02	4 038	11.47		0.53	1.17
1901	9 079	25.41	909	100.12	3 974	11.12		0.60	1.06
1906	8 921	24.57	675	75.66	3 872	10.66		0.77	1.08
1911	11 057	28.86	670	60.60	4 038	9.81	1.04	0.74	0.85
1916	11 857	26.85	868	73.21	5 077	11.50	1.29	0.81	0.93
1921	11 974	24.09	784	65.48	4 982	10.02	1.13	0.92	0.80
1926	11 483	20.73	509	44.33	4 877	8.81	1.00	0.96	0.71
1931	9 079	15.77	330	36.35	4 888	8.49	1.39	1.20	0.58
1936	8 911	15.16	277	31.09	5 464	9.29	1.87	1.26	0.40
1941	10 965	18.24	356	32.47	6 288	10.46	2.62	1.26	0.37
1946	15 813	24.90	428	27.07	6 461	10.17	3.03	1.29	0.29
1947	16 317	25.23	396	24.27	6 215	9.61	2.86	1.28	0.30
1948	15 870	24.00	472	29.74	6 748	10.20	3.08	1.42	0.28
1949	16 042	23.58	444	27.68	6 373	9.37	2.90	1.23	0.21
1950	17 306	24.39	416	24.04	6 740	9.50	3.05	1.24	0.19
1951	17 463	23.84	428	24.51	7 184	9.81	3.24	1.24	0.15
1952	17 884	23.69	413	23.09	7 050	9.34	3.10	1.29	0.12
1953	18 156	23.39	375	20.65	6 962	8.97	3.00	1.27	0.06
1954	18 227	22.89	388	21.29	7 179	9.01	3.11	1.22	0.08
1955	18 494	22.55	431	23.30	7 536	9.19	3.12	1.28	0.06
1956	18 964	22.35	377	19.88	7 593	8.95	3.24	1.16	0.05
1957	19 536	22.35	403	20.63	7 576	8.67	2.91	1.29	0.05
1958	20 047	22.35	449	22.40	7 743	8.63	2.93	1.26	0.07
1959	20 372	22.12	422	20.71	7 943	8.62	2.89	1.22	0.05
1960	20 966	22.19	397	18.94	7 804	8.26	3.06	1.21	0.04
1961	22 399	23.09	448	20.00	7 815	8.06	2.92	1.26	0.06
1962	21 361	21.67	409	19.15	8 232	8.35	3.06	1.37	0.03
1963	21 367	21.20	399	18.67	8 201	8.14	2.99	1.27	0.04
1964	20 866	20.16	397	19.03	8 906	8.61	3.24	1.32	0.01
1965	20 891	19.63	385	18.43	8 788	8.26	3.11	1.30	0.03
1966(d)	20 362	18.61	364	17.88	9 345	8.54	3.22	1.32	0.02
1967	20 386	18.37	346	16.97	9 071	8.17	3.09	1.35	0.02
1968	21 207	18.89	345	16.27	9 916	8.83	3.29	1.41	0.02
1969	21 977	19.28	347	15.79	9 337	8.19	2.96	1.47	0.02
1970	22 617	19.52	367	16.23	10 138	8.75	3.20	1.43	0.01
1971	22 996	19.39	366	15.92	9 686	8.17	2.89	1.40	0.02
1972	21 844	18.17	367	16.80	9 764	8.12	2.94	1.46	0.01
1973	20 407	16.75	276	13.52	9 835	8.07	2.95	1.47	0.01
1974	20 181	16.33	312	15.46	10 236	8.29	2.96	1.49	0.01
1975	19 986	15.95	222	11.11	9 947	7.94	2.85	1.52	0.01
1976	18 947	14.86	276	14.57	9 999	7.84	2.91	1.45	0.00
1977	19 260	14.98	221	11.47	9 784	7.61	2.80	1.50	0.00
1978	18 558	14.32	227	12.23	9 763	7.53	2.80	1.54	0.00
1979	18 478	14.20	166	8.98	9 661	7.42	2.76	1.50	0.00
1980	18 499	14.14	187	10.11	9 580	7.32	2.58	1.62	0.00
1981	19 351	14.68	157	8.11	9 706	7.36	2.63	1.66	0.00
1982	19 294	14.52	221	11.45	10 457	7.87	2.75	1.70	0.00
1983 (e)	19 830	14.78	183	9.23	9 869	7.36	2.68	1.72	0.00

(a) Under one year of age from 1871, under two years of age in previous years. (b) Rate per 1 000 of mean population. From 1976 mean resident population. (c) Rate per 1 000 live births registered. (d) Vital events of full-blood Aborigines, where identified in registrations, were excluded before 1966. (e) From 1983 State of usual residence not State of registration.



## SOCIAL DEVELOPMENT

## Marriages and Divorces; Law and Order

Year	Marriages		Divorces (b)	Bank- ruptcies	Court Convictions		Police	
	Total	Rate (a)			Higher Courts (c)	Courts of Summary Jurisdiction (d)	Police Personnel	Net Expenditure
								\$'000
1841				36	37			
1846	220	8.50		16	40			
1851	189	2.84		106	103		127	
1856	1 171	10.85		88	85	2 919	174	
1861	1 158	9.03		115	62	3 025	151	
1866	1 299	7.86		252	107	4 341	208	90
1871	1 250	6.70		247	91	4 864	187	74
1876	1 852	8.52		200	129	7 905	257	108
1881	2 308	8.21		696	213	13 231	371	164
1886	1 976	6.42	10	535	121	6 808	401	178
1891	2 315	7.21	5	142	85	6 918	388	172
1896	2 183	6.20	6	240	110	5 149	347	150
1901	2 304	6.45	6	165	98	4 968	359	152
1906	2 679	7.38	3	172	92	5 249	373	153
1911	4 036	9.80	20	190	74	7 303	423	183
1916	3 602	8.16	14	324	52	7 145	541	262
1921	4 383	8.82	88	155	97	8 968	566	391
1926	4 503	8.13	71	439	174	21 417	633	499
1931	3 069	5.33	138	996	274	14 760	763	641
1936	5 182	8.81	213	551	171	14 920	701	570
1941	6 855	11.40	273	284	177	21 990	707	689
1949	6 247	9.18	590	52	205	(e) 22 834	(e) 928	(e) 1 208
1950	6 585	9.28	661	44	207	25 496	942	1 398
1951	6 646	9.07	637	53	307	28 675	913	1 647
1953	6 149	7.92	628	91	330	30 229	982	2 429
1954	6 190	7.77	594	89	312	25 482	986	2 617
1955	6 226	7.59	624	106	340	29 264	969	2 517
1956	6 277	7.40	567	150	362	28 221	1 018	3 060
1959	6 614	7.18	503	366	499	34 203	1 243	4 084
1960	6 607	6.99	610	368	580	42 531	1 301	4 499
1961	6 804	7.01	718	561	606	52 155	1 376	5 043
1962	7 021	7.12	685	620	718	53 531	1 466	5 651
1963	7 302	7.24	765	584	745	57 189	1 441	5 825
1964	7 765	7.50	887	675	629	55 408	1 496	6 245
1965	8 680	8.16	852	582	713	62 238	1 558	6 912
1966	9 051	8.27	1 069	648	738	71 694	1 595	7 319
1967	9 434	8.50	929	660	707	87 110	1 660	8 417
1968	9 652	8.60	915	759	692	105 027	1 777	9 137
1969	10 599	9.30	963	659	712	105 966	1 845	9 568
1970	10 864	9.38	939	611	694	114 499	1 881	10 621
1971	10 833	9.21	1 264	(f) 626	(f) 931	110 543	1 971	12 181
1972	10 829	9.10	1 235	643	964	123 063	2 063	12 961
1973	10 806	9.01	1 582	554	982	(g) 94 068	2 167	15 107
1974	10 769	8.84	1 561	373	906	93 037	2 264	19 334
1975	9 843	7.95	1 812	437	989	104 402	2 461	28 035
1976	10 902	8.64	(h) 6 142	351	1 080	95 758	2 548	37 488
1977	10 126	7.93	4 419	456	1 075	105 224	2 718	44 669
1978	9 800	7.61	3 805	673	1 258	105 413	2 879	53 456
1979	9 778	7.55	3 794	847	1 281	88 404	3 093	58 868
1980	10 064	7.75	4 203	1 016	n.a.	n.a.	(i) 3 423	67 020
1981	10 252	7.77	4 132	1 012	n.a.	n.a.	3 427	78 876
1982	10 935	8.23	4 526	860	1 321	(j) 15 384	3 400	85 086
1983	10 550	7.87	4 431	962	n.y.a.	n.y.a.	3 357	90 135
1984	n.y.a.	n.y.a.	n.y.a.	817	n.y.a.	n.y.a.	3 361	96 237

(a) Rate per 1 000 of mean population. (b) Dissolutions made absolute. (c) Distinct persons only. From 1982 includes corporate bodies. (d) Each type of offence counted separately when there are multiple charges against an individual. (e) Year ended 30 June from 1943. (f) Year ended 30 June from 1971. (g) Excludes juvenile offenders from 1973. (h) The *Family Law Act 1975* repealing State legislation, came into operation throughout Australia in 1976. (i) From 1980 includes trainees, cadets and probationary constables. (j) From 1982 excludes offences relating to the Road Traffic Act.

## SOCIAL DEVELOPMENT

## Education

Year	Primary and Secondary						Tertiary		Further
	Government Schools (a)			Non-government Schools			Uni- versities	Colleges of Advanced Education	Course Enrol- ments
	Students			Students			Students (b)	Students	
	No.	Primary	Secondary	No.	Primary	Secondary			
1851 .....	115	3 031							
1856 .....	147	6 516							
1861 .....	219	10 711		236					
1866 .....	292	14 690		n.a.					
1871 .....	307	15 791		n.a.					
1876 .....	281	25 889		326			58		
1881 .....	405	36 888		363			74		
1886 .....	504	44 405		n.a.			197		
1891 .....	552	47 094		285			246		
1896 .....	639	59 944		232			320		
1901 .....	706	63 183		230			591		
1906 .....	708	57 270		215	(c) 9 753		626		
1911 .....	743	53 494	1 800	179	(c) 11 121		641		
1916 .....	857	63 935	3 047	(d) 218	(d) 12 785		491		
1921 .....	973	77 111	3 067	171	13 951	1 338			
1926 .....	1 019	79 204	6 527	188	16 139	1 575			
1931 .....	1 075	81 218	10 503	186	14 310	2 092			
1936 .....	1 100	75 411	9 280	174	13 993	2 025			
1941 .....	1 006	63 303	10 761	167	13 915	2 211			
1946 .....	811	61 242	11 870	145	16 310	3 723			
1951 .....	728	81 642	14 106	146	20 677	3 720			
1954 .....	716	105 022	17 972	157	24 949	3 555			
1955 .....	701	111 909	19 485	157	26 840	3 617			
1956 .....	699	118 365	22 134	163	29 050	3 828			
1957 .....	694	123 132	24 734	163	30 504	4 424			
1958 .....	674	125 678	28 189	161	32 425	4 816			
1959 .....	668	129 850	33 042	162	33 896	5 300			
1960 .....	681	132 372	37 901	163	35 370	5 723			
1961 .....	688	135 274	41 889	165	35 652	6 250			
1962 .....	682	136 924	46 499	164	(e) 24 962	(e) 11 440	6 824		
1963 .....	682	140 520	49 637	166	24 677	12 354	7 416		
1964 .....	685	145 042	54 026	170	24 761	12 890	8 203		
1965 .....	700	150 809	57 811	172	24 605	13 007	8 658		
1966 .....	700	154 253	60 834	172	24 188	12 999	9 364		
1967 .....	674	157 424	65 630	173	23 533	13 469	9 658		
1968 .....	683	157 997	68 814	171	22 814	13 599	9 803		
1969 .....	676	159 682	71 599	171	22 257	14 203	10 128	3 420	
1970 .....	681	156 922	71 866	170	22 464	14 642	10 176	3 443	
1971 .....	662	156 458	74 982	169	22 669	15 018	10 682	4 242	
1972 .....	(f) 615	154 886	77 926	163	22 232	15 233	11 124	(g) 4 291	78 540
1973 .....	614	152 698	79 088	163	21 929	15 806	11 497	6 662	78 214
1974 .....	613	152 901	79 578	157	22 399	16 494	12 264	12 163	88 154
1975 .....	619	151 975	82 737	151	22 479	16 818	12 876	13 773	91 421
1976 .....	625	151 499	82 115	147	22 177	17 122	13 493	14 560	124 305
1977 .....	626	152 079	81 131	145	22 361	17 085	13 390	15 168	139 651
1978 .....	628	149 964	80 491	151	22 353	17 088	12 904	15 996	137 837
1979 .....	632	146 793	77 732	155	22 591	17 381	12 840	16 042	147 329
1980 .....	638	142 290	76 392	159	23 347	17 769	12 677	16 976	149 437
1981 .....	638	137 860	75 173	163	24 729	18 583	12 811	17 558	163 440
1982 .....	(h) 716	131 250	75 266	169	25 805	19 952	12 892	17 031	168 007
1983 .....	714	127 334	78 183	173	27 183	21 087	13 242	17 158	177 969
1984 .....	708	121 615	79 605	174	27 412	21 957	13 584	18 277	n.y.a.

(a) Net enrolment to 1969, thereafter at census date (at or about 1 August, until 1980 when it became 1 July). Includes Northern Territory before 1958. (b) Excludes students at Conservatorium of Music not also enrolled for degree or diploma subject. (c) On last school day. (d) Non-government schools compulsorily registered, previous years incomplete. From 1916 to 1961 net enrolment including Northern Territory. (e) From 1962 at census date. Excludes Northern Territory. (f) From 1972 includes only primary and secondary, before 1972 included technical institutions. (g) In approved courses at colleges of advanced education. (h) Government junior primary schools counted as separate schools from 1982.

## SOCIAL DEVELOPMENT

## Health

Year	Recognised Hospitals				Mental Hospitals(a)		Medical Practitioners Registered	General Nurses Registered
	Number of Hospitals	Patients Treated	Revenue		Admissions during Year	Patients at end of Year		
			State Govt Aid	Total				
				\$'000				
1846.....	1				10	6	22	
1851.....	1	413			9	11	68	
1856.....	1	559			69	73	101	
1861.....	1	795			68	167	111	
1866.....	1	1 257			88	224	85	
1871.....	1	1 433			111	324	77	
1876.....	1	2 282			149	427	94	
1881.....	1	2 258			199	606	113	
1886.....	1	2 022			207	744	152	
1891.....	1	2 301			224	815	177	
1896.....	1	2 633			195	934	279	
1901.....	1	3 554			214	988	341	
1906.....	9	4 476			231	994	242	
1911.....	21	8 547	96	132	273	1 084	299	
1916.....	27	12 453	130	186	302	1 158	326	
1921.....	31	15 642	254	397	272	1 190	360	
1926.....	45	22 438	467	730	249	1 282	445	1 271
1931.....	51	26 505	356	574	250	1 395	457	1 601
1936.....	52	34 014	383	730	272	1 627	477	1 886
1941.....	55	40 593	607	1 063	247	1 905	814	2 562
1946.....	(b) 58	(b) 46 696	(b) 836	(b) 1 697	(b) 302	(b) 2 024	947	3 314
1947.....	59	52 388	1 135	2 133	332	2 107	983	3 380
1948.....	59	50 480	1 382	2 476	330	2 165	1 012	3 589
1949.....	60	53 558	1 671	3 065	398	2 213	1 053	3 808
1950.....	59	54 334	2 109	3 719	379	2 310	1 111	4 018
1951.....	60	57 401	2 694	4 503	452	2 411	1 172	4 199
1952.....	61	59 374	3 739	6 110	426	2 425	1 244	4 461
1953.....	62	61 681	4 673	7 442	498	2 534	1 202	4 585
1954.....	62	62 138	4 340	7 386	548	2 644	1 265	4 724
1955.....	63	64 310	5 524	8 819	516	2 612	1 348	4 884
1956.....	65	69 295	8 214	11 702	553	2 658	1 395	5 026
1957.....	65	73 249	11 370	15 449	543	2 594	1 469	5 122
1958.....	64	75 282	10 425	15 372	659	2 667	1 507	5 475
1959.....	65	79 426	10 260	15 638	712	2 643	1 601	5 583
1960.....	65	82 948	10 474	16 829	1 637	2 810	1 681	5 817
1961.....	66	87 386	10 155	17 414	1 846	2 833	1 739	6 123
1962.....	65	89 409	10 366	18 350	1 925	2 914	1 821	6 523
1963.....	65	94 144	10 007	19 307	2 604	2 799	1 883	6 879
1964.....	65	99 491	12 094	21 166	3 132	2 838	2 002	7 255
1965.....	65	105 098	14 171	24 084	3 061	2 752	2 080	7 699
1966.....	67	111 313	19 681	30 386	2 810	2 646	2 175	8 065
1967.....	65	117 693	22 138	34 532	2 866	2 497	2 282	8 467
1968.....	65	122 835	16 626	31 039	2 733	2 465	2 372	8 832
1969.....	65	132 864	21 364	37 064	2 964	2 283	2 474	9 275
1970.....	66	135 433	23 198	41 500	3 378	2 269	2 568	9 855
1971.....	67	135 927	32 971	53 942	3 527	2 193	2 707	10 506
1972.....	68	147 058	29 671	53 750	3 602	2 159	3 054	11 201
1973.....	69	158 261	37 951	64 633	3 225	2 208	3 154	11 923
1974.....	70	164 797	53 893	85 255	3 309	2 123	3 348	12 717
1975.....	71	168 832	82 194	124 930	3 410	2 074	3 767	13 863
1976.....	73	179 733	73 910	164 292	3 665	1 769	4 531	14 976
1977.....	81	190 806	87 294	206 060	3 489	1 766	4 574	16 384
1978.....	81	202 802	102 371	250 131	3 648	1 670	4 783	17 653
1979.....	81	216 315	107 401	263 490	3 971	1 691	4 800	18 938
1980.....	81	220 138	108 433	269 662	4 470	1 711	5 100	20 052
1981.....	81	228 593	128 148	307 720	6 279	1 679	5 500	21 111
1982.....	81	222 319	134 132	344 203	6 790	1 574	4 778	22 097
1983.....	81	237 625	149 841	394 553	5 867	844	4 991	23 010
1984.....	81	249 572	155 340	417 092	6 084	773	5 200	15 979

(a) From 1959-60 covers all in-patients (certified and voluntary) in institutions. Before this covered only certified patients in two 'long-term' institutions. (b) Year ended 30 June from 1946.

## SOCIAL DEVELOPMENT

## Social Welfare

Year	Pensions and Benefits Paid in South Australia by Commonwealth Government					Pensioners	
	Age and Invalid Pensions	Disability and Service Pensions (a)	Family Allowance (b)	National Health Services	Total (Includes Other)	Age and Invalid	Disability and Service (a)
						Number	
1915-16 .....	544	20				10 993	794
1920-21 .....	910	1 028			2 060	12 320	14 663
1925-26 .....	1 404	978			2 496	14 098	16 144
1930-31 .....	1 982	994			3 074	20 602	16 653
1932-33 .....	1 826	844			2 726	21 461	15 517
1933-34 .....	1 896	854			2 804	22 805	15 352
1934-35 .....	2 068	892			3 016	24 517	15 248
1935-36 .....	2 298	942			3 298	26 134	15 997
1936-37 .....	2 522	1 036			3 622	27 308	16 340
1937-38 .....	2 868	1 076			4 010	28 039	16 865
1938-39 .....	2 836	1 098			4 008	28 857	16 680
1939-40 .....	2 908	1 104			4 086	29 521	16 145
1940-41 .....	3 032	1 088			4 192	29 642	15 424
1941-42 .....	3 274	1 108	1 720		6 162	28 422	15 296
1942-43 .....	3 628	1 274	1 810		7 076	27 423	16 333
1943-44 .....	3 688	1 654	1 908		8 076	27 530	18 472
1944-45 .....	3 624	1 838	1 870		8 276	27 507	22 071
1945-46 .....	4 670	2 272	2 854	244	11 262	29 512	30 687
1946-47 .....	5 102	2 692	3 196	856	13 212	32 387	35 117
1947-48 .....	6 284	3 046	3 212	770	14 708	34 229	38 505
1948-49 .....	7 170	3 718	4 024	1 054	17 442	35 470	42 931
1949-50 .....	7 888	4 178	4 938	1 220	19 966	36 524	47 303
1950-51 .....	8 600	5 214	7 564	2 122	25 216	36 582	51 589
1951-52 .....	10 360	6 442	8 298	3 554	30 532	37 363	54 758
1952-53 .....	12 616	7 130	9 540	4 154	25 878	39 700	58 591
1953-54 .....	14 150	7 686	9 154	4 880	38 202	42 216	61 039
1954-55 .....	15 310	8 778	9 428	5 824	41 560	45 147	63 767
1955-56 .....	17 718	9 074	10 998	6 140	46 322	47 754	66 535
1956-57 .....	19 244	9 575	10 500	6 710	48 926	50 209	68 291
1957-58 .....	21 432	10 664	10 860	7 704	54 256	52 699	69 852
1958-59 .....	23 150	10 860	12 618	9 868	60 460	55 181	71 331
1959-60 .....	26 366	12 697	11 794	11 977	66 157	57 336	72 013
1960-61 .....	28 537	13 722	14 092	12 811	73 594	60 483	72 695
1961-62 .....	32 844	14 241	12 671	14 567	80 283	64 374	74 454
1962-63 .....	33 951	14 867	12 861	16 066	83 393	64 156	73 239
1963-64 .....	36 120	16 224	15 916	17 080	91 514	65 573	72 518
1964-65 .....	38 509	16 006	16 563	18 948	96 362	66 798	70 678
1965-66 .....	39 691	17 692	16 988	21 254	102 661	67 999	68 439
1966-67 .....	43 720	16 776	19 063	23 100	111 394	70 521	66 624
1967-68 .....	46 711	17 252	17 835	25 448	116 625	74 016	65 078
1968-69 .....	50 828	19 065	18 162	28 411	128 940	76 616	62 986
1969-70 .....	58 720	19 435	20 287	33 476	145 857	85 076	61 928
1970-71 .....	64 714	20 405	18 284	41 773	161 687	88 936	60 406
1971-72 .....	76 545	22 493	19 766	50 587	189 255	92 771	58 682
1972-73 .....	101 625	25 917	22 780	57 851	236 747	104 350	59 707
1973-74 .....	131 771	31 350	20 098	66 005	291 823	116 117	59 522
1974-75 .....	184 218	41 774	20 237	82 399	400 590	123 627	59 130
1975-76 .....	234 266	49 377	22 896	223 151	632 412	130 229	59 536
1976-77 .....	273 814	59 709	87 491	177 894	722 242	136 473	60 492
1977-78 .....	333 579	72 018	90 483	204 412	871 650	141 941	61 642
1978-79 .....	374 344	78 219	84 100	230 840	973 385	146 860	62 505
1979-80 .....	418 769	89 073	97 481	253 694	1 062 830	150 599	65 109
1980-81 .....	472 416	112 090	88 861	262 041	1 241 724	153 210	67 696
1981-82 .....	544 874	126 728	96 856	290 967	n.y.a.	155 924	69 924
1982-83 .....	598 618	162 680	125 474	n.y.a.	n.y.a.	160 694	73 812
1983-84 .....	673 503	n.y.a.	137 887	n.y.a.	n.y.a.	160 829	76 686

(a) From 1974-75, war pensions known as disability pensions.

(b) Family allowance known as child endowment before 1975-76.

## EMPLOYMENT AND UNEMPLOYMENT

Year	Civilian Labour Force (a)		Civilian Employment (a)		Factory Employment (b)		Unemployed (a)		
	Males	Females	Males	Females	Males	Females	Number		Rate (c)
							Males	Females	Persons
									Per cent
									'000
1911 .....					22.6	5.3			
1925-26 .....					33.1	6.9			
1930-31 .....					19.3	4.6			
1935-36 .....					31.4	7.1			
1936-37 .....					33.4	7.3			
1937-38 .....					36.3	7.8			
1938-39 .....					35.4	8.0			
1939-40 .....					36.3	8.7			
1940-41 .....					40.1	10.8			
1941-42 .....					49.9	15.3			
1942-43 .....					52.8	20.0			
1943-44 .....					50.7	18.9			
1944-45 .....					49.1	16.4			
1945-46 .....					49.5	13.7			
1946-47 .....					56.7	14.0			
1947-48 .....					59.1	14.3			
1948-49 .....					60.9	14.9			
1949-50 .....					63.1	15.3			
1950-51 .....					66.8	16.2			
1951-52 .....					68.0	15.9			
1952-53 .....					67.1	13.4			
1953-54 .....					70.7	14.8			
1954-55 .....					73.7	15.9			
1955-56 .....					76.1	16.4			
1956-57 .....					75.5	16.4			
1957-58 .....					75.9	16.6			
1958-59 .....					77.4	16.7			
1959-60 .....					81.3	17.7			
1960-61 .....					81.9	18.1			
1961-62 .....					81.8	17.3			
1962-63 .....					86.7	18.6			
1963-64 .....					90.9	19.9			
1964-65 .....					94.7	21.5			
1965-66 .....					96.2	22.1			
1966-67 .....	321.9	143.5	316.6	136.5	96.1	22.1	5.3	7.0	2.6
1967-68 .....	319.8	144.5	315.0	138.1	98.9	22.5	4.9	6.4	2.4
1968-69 .....	328.7	152.1	323.9	146.0	(d) 91.0	(d) 22.1	4.9	6.2	2.3
1969-70 .....	332.7	161.2	329.3	155.8	94.6	23.8	3.4	5.4	1.8
1970-71 .....	335.4	168.1	331.4	163.1	n.a.	n.a.	4.0	5.0	1.8
1971-72 .....	343.2	170.1	338.0	162.1	96.2	25.4	5.1	7.9	2.5
1972-73 .....	348.9	182.2	341.5	172.6	95.6	25.8	7.5	9.6	3.2
1973-74 .....	358.3	196.5	352.9	188.0	98.7	29.4	5.3	8.4	2.5
1974-75 .....	364.3	200.9	358.5	190.9	(e) 94.3	(e) 27.0	5.8	10.0	2.8
1975-76 .....	366.5	211.3	355.0	194.3	90.3	25.8	11.5	17.0	4.9
1976-77 .....	372.0	217.0	361.0	203.2	89.9	25.5	11.0	13.7	4.2
1977-78 .....	(f) 380.1	(f) 223.0	(f) 356.0	(f) 206.5	86.0	24.0	(f) 24.1	(f) 16.5	(f) 6.7
1978-79 .....	376.1	224.0	352.2	203.2	82.6	23.7	23.9	20.8	7.5
1979-80 .....	376.2	222.2	349.8	200.4	83.5	23.5	26.4	21.8	8.1
1980-81 .....	375.7	229.7	350.7	210.3	81.4	23.3	25.0	19.5	7.4
1981-82 .....	374.2	229.5	348.7	208.6	81.4	23.5	25.5	20.8	7.7
1982-83 .....	382.1	224.5	338.9	199.7	74.8	21.1	43.1	24.8	11.2
1983-84 .....	380.2	235.2	346.0	213.3	n.y.a.	n.y.a.	34.2	21.9	9.1

(a) From Labour Force Surveys for June from 1978; for August in earlier years. (b) Average employment including working proprietors during the year. (c) Unemployment rate is the number unemployed as a proportion of the number in the labour force. (d) Direct comparisons with figures for previous years are not possible because of changes in the scope of the census and in the Census units. (e) From 1974-75 excludes single establishment enterprises employing fewer than four persons. (f) Labour force estimates for periods prior to 1977-78 are based on 1976 Census benchmarks. From 1977-78 onwards estimates are based on 1981 Census benchmarks.

## WAGES

31 December	State Living Wage		Federal Basic and Minimum Wage Rates (a)		Minimum Weekly Wage Rates (b)		Award Rates of Pay Indexes (c)	
	Males	Females	Males	Females	Males	Females	Males	Females
	\$		\$		\$			
1911 .....			5-10					
1921 .....	7-95	3-50	7-95		8-94	4-52		
1926 .....	8-55	3-95	8-55		9-57	5-00		
1931 .....	6-30	3-15	5-81		7-50	4-39		
1936 .....	6-60	3-30	6-90		7-95	4-33		
1938 .....	7-40	3-65	7-60		8-71	4-78		
1939 .....	7-80	3-80	7-70		9-41	4-96		
1940 .....	8-40	4-10	8-00		9-85	5-21		
1941 .....	8-70	4-35	8-40		10-58	5-54		
1943 .....	9-40	4-62	9-40		11-61	6-12		
1944 .....	9-40	4-62	9-30		11-58	6-53		
1945 .....	9-40	4-62	9-30		11-60	6-72		
1946 .....	9-85	5-50	10-20		12-41	7-60		
1947 .....	10-60	5-90	10-60		13-78	8-80		
1948 .....	11-70	6-65	11-60		15-22	9-51		
1949 .....	12-50	6-85	12-60		16-44	10-10		
1950 .....	15-80	11-85	15-80	11-85	19-79	14-21		
1951 .....	19-50	14-60	19-50	14-60	23-60	17-02		
1952 .....	22-90	17-15	22-90	17-15	27-08	19-68		
1953 .....	23-10	17-30	23-10	17-30	27-35	19-91		
1954 .....	23-10	17-30	23-10	17-30	28-16	19-99		
1955 .....	23-10	17-30	23-10	17-30	28-50	20-18		
1956 .....	24-10	18-05	24-10	18-05	29-63	20-92		
1957 .....	25-10	18-80	25-10	18-80	30-69	21-95		
1958 .....	25-60	19-20	25-60	19-20	31-24	22-38		
1959 .....	27-10	20-30	27-10	20-30	33-99	23-92		
1960 .....	27-10	20-30	27-10	20-30	34-22	24-29		
1961 .....	28-30	21-20	28-30	21-20	35-46	25-20		
1962 .....	28-30	21-20	28-30	21-20	35-65	25-23		
1963 .....	28-30	21-20	28-30	21-20	36-40	25-52		
1964 .....	30-30	22-70	30-30	22-70	38-69	27-29		
1965 .....	30-30	22-70	30-30	22-70	39-48	27-75		
1966 .....	32-30	24-20	32-30	24-20	41-75	29-42		
1967 .....	33-30	25-20	(a) 37-05		43-79	31-32		
1968 .....	34-65	26-55	38-40		48-23	33-60		
1969 .....	(d) 34-65	(d) 26-55	41-90		50-76	35-94		
1970 .....	(d) 34-65	(d) 26-55	41-90		52-12	37-51		
1971 .....	37-85	29-00	45-90		59-38	44-16		
1972 .....	39-85	31-00	50-60		65-82	50-50		
1973 .....	43-15	34-10	59-60		75-20	62-11		
1974 .....	46-50	37-30	67-60	(e) 60-80	103-32	91-47		
1975 .....	(f)	(f)	82-40		115-13	103-34		
1976 .....	(f)	(f)	100-20		132-20	125-62	104-3	104-4
1977 .....	(f)	(f)	111-80		145-69	139-06	115-1	114-8
1978 .....	(f)	(f)	119-60		158-53	149-15	124-2	123-1
1979 .....	(f)	(f)	123-40		167-12	154-58	131-1	128-0
1980 .....	(f)	(f)	134-40		184-39	172-56	146-2	144-8
1981 .....	(f)	(f)	144-40		215-25	192-63	167-1	160-5
1982 .....	(f)	(f)	144-40		(g) 229-10	(g) 209-52	186-1	181-2
1983 .....	(f)	(f)	150-60		(h)	(h)	195-8	191-6
1984 .....	(f)	(f)	156-80		(h)	(h)	204-8	202-9

(a) Provisions for minimum wages (for adult males only) were inserted in Commonwealth Awards in July 1966 and basic wages were replaced by the total wage concept in July 1967. (b) Adult rates for all industries excluding rural. (c) Base: Weighted average minimum award rate, June 1976 = 100-0. Includes wage and salary earners for all industries excluding rural, the permanent defence forces and private households employing staff. (d) An economic loading of 3 per cent of the sum of the living wage plus margin was added to all award rates of pay from December 1969 to January 1971. (e) Between May 1974 and June 1975 the minimum wage for adult males was extended to adult females in three steps. (f) Increased to \$48.20 and \$38.60 for males and females respectively from May 1975 and abolished in September 1975, award rates thereafter being specified as total wages. (g) At 1 August. (h) Discontinued and replaced by Award Rates of Pay Indexes.

## PRICES

Year	Retail Price Indexes: Adelaide						Agricultural Produce at Principal Markets		
	'C' Series (a)			Consumer (b)			Wheat (per tonne) (c)	Barley (per tonne)	Wool (per kg)
	Food and Groceries	Rent	All Groups	Food	Housing	All Groups			
							\$		Cents
1901 .....	575								
1911 .....	570						12·71	16·53	15·59
1916 .....	835	573	798				17·45	14·33	19·78
1921 .....	941	819	989				29·39	19·49	24·74
1926 .....	1 045	927	1 026				22·82	17·64	27·45
1931 .....	789	755	837				8·41	9·92	12·52
1936 .....	798	795	839				14·07	9·83	21·89
1939 .....	897	888	906				8·34	11·95	16·71
1940 .....	900	892	936				14·92	15·61	21·94
1941 .....	905	893	988				16·42	21·43	21·76
1942 .....	1 046	893	1 075				16·76	14·64	21·58
1943 .....	1 003	893	1 102				19·51	19·84	25·07
1944 .....	993	892	1 098				22·71	19·05	24·96
1945 .....	1 002	892	1 102				20·69	24·07	24·71
1946 .....	1 006	894	1 120				29·47	27·91	24·78
1947 .....	1 067	897	1 165				36·49	39·33	40·50
1948 .....	1 230	903	1 277				56·70	74·30	65·92
1949 .....	1 351	912	1 393	38·6	38·4	45·0	45·64	36·95	81·09
1950 .....	1 494	929	1 521	41·7	40·0	48·4	52·98	49·69	106·13
1951 .....	1 931	949	1 833	48·2	42·5	54·6	53·76	51·54	237·28
1954 .....	2 525	1 174	2 277	71·2	61·5	74·7	53·35	44·84	138·18
1955 .....	2 657	1 247	2 354	72·9	63·2	75·6	49·05	59·97	120·66
1956 .....	2 871	1 358	2 466	76·2	67·6	78·1	49·60	46·74	103·57
1957 .....	2 710	1 468	2 463	78·9	72·3	81·2	53·28	48·50	135·63
1958 .....	2 768	1 592	2 536	76·9	74·9	81·8	53·50	52·38	103·09
1959 .....	2 998	1 674	2 647	80·7	76·7	83·6	51·51	49·43	83·84
1960 .....				84·6	78·3	86·2	53·83	44·53	98·88
1961 .....				90·9	83·2	89·8	55·37	40·39	88·49
1962 .....				87·7	85·9	89·5	55·70	49·43	91·69
1963 .....				86·6	86·7	89·1	53·94	48·94	98·92
1964 .....				88·8	88·7	90·2	52·65	49·12	119·53
1965 .....				93·9	92·1	93·9	51·88	50·84	97·31
1966 .....				97·1	95·7	97·0	55·15	51·85	102·98
1967 .....				100·0	100·0	100·0	54·67	52·56	99·69
1968 .....				104·7	102·1	102·9	58·86	52·47	82·87
1969 .....				106·4	104·7	105·3	50·01	41·09	91·76
1970 .....				107·1	109·3	108·2	51·88	36·82	75·02
1971 .....				109·5	115·9	112·5	52·98	49·21	59·74
1972 .....				113·6	124·4	119·2	55·26	40·96	72·21
1973 .....				123·1	133·3	126·5	56·09	59·30	178·07
1974 .....				148·3	150·6	143·9	103·20	87·59	176·54
1975 .....				163·7	185·3	169·7	111·21	106·11	120·12
1976 .....				180·6	222·1	190·5	104·46	98·14	134·46
1977 .....				(d) 65·6	(d) 75·6	(d) 70·5	90·36	106·52	173·39
1978 .....				73·1	81·9	77·5	102·20	88·37	179·03
1979 .....				80·6	86·0	83·2	127·83	83·95	193·65
1980 .....				90·9	92·1	91·6	153·24	126·84	224·56
1981 .....				100·0	100·0	100·0	154·92	144·99	245·55
1982 .....				108·8	110·1	110·5	159·61	139·47	262·85
1983 .....				118·9	123·4	123·5	177·54	155·35	260·24
1984 .....				127·2	136·2	132·3	164·86	154·54	281·10

(a) Base: Average all groups six capital cities 1923 to 1927 = 1 000.

(b) Base of each group 1966-67 = 100·0. Index numbers are average for year ended 30 June in the year stated.

(c) Bulk wheat from 1962, previously bagged.

(d) Base of each group 1980-81 = 100·0.

## METEOROLOGY, ADELAIDE

Year	Rainfall		Evapora- tion	Sunshine	Temperature		
	Days of Rain	Total	Total	Total	Extreme Maximum	Extreme Minimum	Mean
	Days	mm	mm	Hours	°C		
1841 .....	93	456					
1846 .....	114	683					
1851 .....	128	786					
1856 .....	118	633					
1861 .....	147	611			42·8	1·7	17·4
1866 .....	116	511			43·1	2·9	17·7
1871 .....	137	591	1 345		44·1	3·0	17·8
1876 .....	110	341	1 548		45·7	0·3	16·9
1881 .....	135	458	1 422		41·0	1·8	16·7
1886 .....	141	366	1 421	2 588	44·7	2·0	17·1
1891 .....	113	356	1 322	2 753	39·3	2·3	16·8
1896 .....	121	385	1 337	2 644	44·0	1·3	17·4
1901 .....	124	457	1 494	2 523	43·3	1·8	17·5
1906 .....	127	674	1 400	2 366	45·1	2·3	17·6
1911 .....	127	407	1 233	2 415	39·3	1·6	17·2
1916 .....	142	715	1 411	2 512	41·9	3·5	16·7
1921 .....	100	575	1 478	2 658	43·1	2·8	18·2
1926 .....	116	564	1 473	2 689	40·1	3·0	17·3
1931 .....	145	565	1 517	2 534	45·9	3·1	16·8
1936 .....	123	491	1 525	2 431	39·8	2·8	17·1
1941 .....	126	573	1 604	2 472	43·3	3·3	16·9
1948 .....	122	544	1 622	2 402	43·4	2·9	16·3
1949 .....	119	463	1 492	2 318	38·0	2·6	15·8
1950 .....	91	408	1 657	2 678	40·0	3·6	17·0
1951 .....	135	646	1 645	2 339	40·5	2·6	16·9
1952 .....	128	508	1 523	2 459	40·8	1·6	15·8
1953 .....	121	508	1 712	2 585	41·3	3·9	16·6
1954 .....	109	425	1 680	2 503	39·4	3·4	16·7
1955 .....	134	624	1 677	2 396	42·8	3·6	16·7
1956 .....	154	692	1 638	2 379	38·3	4·1	16·4
1958 .....	121	446	1 672	2 455	39·0	1·2	16·4
1959 .....	88	288	1 750	2 592	43·3	3·1	17·3
1960 .....	129	586	1 606	2 356	41·8	2·4	16·3
1961 .....	122	379	<i>n.a.</i>	2 586	40·8	2·9	17·8
1962 .....	125	456	<i>n.a.</i>	2 559	42·7	4·2	17·2
1963 .....	118	621	1 620	2 369	39·9	3·3	17·0
1964 .....	135	556	1 507	2 200	40·3	2·3	16·3
1965 .....	111	339	1 648	2 439	38·8	2·6	17·3
1966 .....	123	495	1 612	2 432	40·7	3·3	16·9
1967 .....	89	257	1 939	2 841	39·0	3·9	17·3
1968 .....	141	653	1 870	2 410	43·1	2·2	17·0
1969 .....	112	525	1 783	2 665	41·1	3·9	16·7
1970 .....	149	483	1 866	2 658	40·5	2·9	16·6
1971 .....	147	672	1 813	2 624	39·6	4·2	17·1
1972 .....	106	446	1 947	2 967	39·6	2·3	17·3
1973 .....	129	675	1 740	2 686	40·5	3·7	17·7
1974 .....	136	639	1 561	2 584	36·9	3·6	17·2
1975 .....	142	522	1 635	2 596	41·2	3·8	17·4
1976 .....	110	366	1 636	2 831	40·5	3·3	16·7
1977 .....	117	400	1 665	2 876	40·3	3·6	17·2
1978 (a) .....	127	588	1 533	2 723	39·3	2·2	16·4
1979 .....	137	661	1 557	2 702	42·0	3·0	17·2
1980 .....	119	527	1 616	2 897	43·3	3·3	17·5
1981 .....	119	672	1 542	2 739	43·4	2·4	17·4
1982 .....	105	357	1 571	2 878	44·2	-0·4	17·4
1983 .....	136	693	1 446	2 745	42·8	0·7	17·0
1984 .....	130	518	1 460	2 802	37·7	1·9	16·7

(a) Recorded at Bureau of Meteorology, Kent Town from 1978.



## RURAL PRODUCTION

## Land Cultivation

Year	Rural Establish- ments	Area of Rural Establish- ments	Area under Crop		Area of Pastures Top- dressed	Area Under Irrigation
			Fertilised	Total		
	No.			'000 hectares		
1846-47 .....				14		
1856-57 .....				82		
1861-62 .....				162		
1866-67 .....				245		
1871-72 .....				339		
1876-77 .....				497		
1881-82 .....				873		
1886-87 .....				925		
1891-92 .....				780		
1896-97 .....				830		
1901-02 .....			335	905		
1906-07 .....			629	873		
1911-12 .....	27 120	47 012	1 010	1 200		
1916-17 .....	29 278	52 475	1 156	1 468		
1921-22 .....	29 693	54 311	1 197	1 367		9.1
1926-27 .....	29 654	54 867	1 430	1 572	66	14.3
1931-32 .....	30 648	52 354	1 705	2 112	56	17.3
1936-37 .....	31 321	55 433	1 619	1 853	366	17.1
1941-42 .....	30 565	58 936	1 409	1 609	427	18.5
1946-47 .....	28 040	59 154	1 366	1 572	450	18.7
1948-49 .....	28 110	59 377	1 327	1 521	705	19.5
1949-50 .....	27 900	59 312	1 263	1 464	725	19.9
1950-51 .....	28 248	61 403	1 316	1 488	753	32.0
1952-53 .....	28 860	61 791	1 270	1 449	940	23.1
1953-54 .....	29 220	60 830	1 350	1 529	1 144	25.1
1954-55 .....	28 092	60 452	1 404	1 576	1 272	28.1
1955-56 .....	28 585	60 689	1 378	1 607	1 416	28.7
1956-57 .....	27 936	60 675	1 376	1 610	1 488	26.7
1957-58 .....	27 971	61 530	1 401	1 581	1 621	32.9
1958-59 .....	28 105	61 639	1 494	1 679	1 504	34.4
1959-60 .....	28 527	62 903	1 489	1 643	1 405	40.8
1960-61 .....	28 711	63 316	1 751	2 010	1 335	41.3
1961-62 .....	28 886	63 494	1 644	1 825	1 450	43.9
1962-63 .....	28 922	63 413	1 787	1 996	1 518	45.6
1963-64 .....	28 711	64 307	1 938	2 177	1 616	47.7
1964-65 .....	28 754	63 517	1 932	2 141	1 908	49.8
1965-66 .....	28 759	64 505	1 971	2 142	2 061	52.1
1966-67 .....	28 957	65 361	2 073	2 322	2 119	56.2
1967-68 .....	29 058	65 059	2 037	2 270	2 076	70.1
1968-69 .....	29 137	65 603	2 431	2 783	1 728	70.4
1969-70 .....	29 035	65 839	2 138	2 407	2 008	75.3
1970-71 .....	29 087	65 795	1 884	2 141	1 938	77.3
1971-72 .....	29 095	65 146	2 113	2 478	1 822	76.1
1972-73 .....	29 001	65 372	1 864	2 084	2 033	83.1
1973-74 .....	28 738	64 843	2 146	2 451	2 425	80.2
1974-75 .....	28 185	63 825	1 986	2 257	2 138	78.9
1975-76 .....	(a) 25 143	63 577	1 821	2 116	1 133	77.9
1976-77 .....	(a) 21 597	63 052	1 785	2 036	1 408	n.a.
1977-78 .....	21 909	62 494	2 309	2 565	1 607	n.a.
1978-79 .....	22 022	62 655	2 596	2 827	1 614	78.4
1979-80 .....	23 155	62 786	n.a.	2 772	1 811	n.a.
1980-81 .....	22 249	62 437	n.a.	2 773	1 894	79.5
1981-82 .....	21 402	62 897	2 677	2 865	1 782	n.a.
1982-83 .....	21 172	60 196	n.a.	2 856	1 610	n.a.
1983-84 .....	19 923	62 063	3 047	3 108	1 631	86.9

(a) Changes in scope of the Agricultural Census. See Part 9.1.

## RURAL PRODUCTION

## Crop Areas and Yields

Year	Cereals for Grain						Hay (a)	Orchards (b) (c)	Vineyards (b)
	Wheat		Barley		Oats				
	Area	Yield per Hectare	Area	Yield per Hectare	Area	Yield per Hectare			
	'000 hectares	Tonnes	'000 hectares	Tonnes	'000 hectares	Tonnes			
1841-42 .....	2	1.40	—	1.12	—	1.12			
1851-52 .....	22	0.85	2	0.92	1	0.98			0.1
1856-57 .....	66	1.68	3	1.19	1	0.90	9	0.4	0.3
1861-62 .....	126	0.74	4	0.89	1	0.91	25	0.7	1.6
1866-67 .....	186	0.96	5	1.13	2	1.00	45	0.9	2.6
1871-72 .....	280	0.39	7	0.53	2	0.49	40	1.1	2.2
1876-77 .....	439	0.36	4	0.60	1	0.48	37	1.3	1.8
1881-82 .....	716	0.31	5	0.64	1	0.48	135	1.8	1.7
1886-87 (d) ...	797	0.37	7	0.73	3	0.56	128	n.a.	2.1
1891-92 .....	628	0.28	5	0.52	5	0.29	123	3.6	5.0
1896-97 .....	685	0.11	6	0.42	16	0.21	137	4.8	7.4
1901-02 .....	706	0.31	6	0.88	14	0.61	150	6.6	8.4
1906-07 .....	683	0.70	11	0.98	23	0.70	121	7.4	9.1
1911-12 .....	887	0.62	17	0.97	44	0.56	211	9.4	9.7
1916-17 .....	1 124	1.11	42	0.94	61	0.54	196	11.7	11.8
1921-22 .....	965	0.70	69	1.08	51	0.46	226	13.1	16.8
1926-27 .....	1 120	0.86	104	1.01	62	0.50	201	12.8	20.3
1931-32 .....	1 648	0.79	98	1.06	84	0.50	218	11.8	21.2
1936-37 .....	1 238	0.63	123	0.78	168	0.26	218	12.0	22.7
1941-42 .....	941	0.88	194	1.37	118	0.58	226	12.0	23.5
1946-47 .....	1 019	0.75	203	0.94	102	0.49	133	11.4	23.6
1951-52 .....	653	1.14	337	1.13	157	0.63	104	11.9	24.8
1953-54 .....	619	1.34	454	1.42	113	0.69	106	12.0	25.1
1954-55 .....	687	1.25	413	1.01	138	0.60	104	12.3	24.5
1955-56 .....	651	1.21	422	1.32	172	0.77	132	13.4	24.2
1956-57 .....	582	1.47	494	1.56	173	0.87	121	13.8	23.2
1957-58 .....	539	0.75	490	0.81	173	0.36	118	14.3	23.2
1958-59 .....	570	1.53	539	1.58	195	1.12	170	15.1	23.0
1959-60 .....	627	0.52	522	0.52	205	0.22	99	15.1	23.0
1960-61 .....	797	1.58	630	1.52	207	1.00	159	15.3	23.0
1961-62 .....	902	1.02	514	0.94	131	0.61	84	15.6	23.4
1962-63 .....	1 050	0.99	426	0.96	168	0.62	116	16.4	23.6
1963-64 .....	1 134	1.30	455	1.21	203	0.82	145	16.9	23.7
1964-65 .....	1 104	1.30	443	1.38	180	0.91	127	17.4	23.8
1965-66 .....	1 111	0.98	444	0.94	184	0.55	121	17.8	23.8
1966-67 .....	1 198	1.22	448	1.20	206	0.91	195	17.9	23.1
1967-68 .....	1 159	0.63	468	0.60	212	0.28	174	18.3	23.5
1968-69 .....	1 517	1.49	572	1.17	209	1.03	249	18.0	24.5
1969-70 .....	1 299	1.24	560	1.23	150	0.80	155	18.1	26.2
1970-71 .....	802	0.98	693	1.07	195	0.78	196	18.3	27.7
1971-72 .....	1 069	1.32	784	1.34	169	0.98	245	17.2	28.8
1972-73 .....	986	0.83	692	0.74	142	0.52	210	16.7	29.5
1973-74 .....	1 432	1.25	627	1.26	152	0.93	268	16.9	29.6
1974-75 .....	1 220	1.22	701	1.62	135	0.83	190	16.6	30.4
1975-76 .....	958	1.19	832	1.32	119	0.90	159	16.5	31.2
1976-77 .....	839	0.99	855	1.04	117	0.77	164	15.8	31.2
1977-78 .....	1 090	0.47	1 073	0.55	130	0.43	138	15.7	31.5
1978-79 .....	1 295	1.61	1 091	1.30	171	1.04	219	15.7	31.3
1979-80 .....	1 424	1.65	984	1.55	129	1.12	160	15.7	30.7
1980-81 .....	1 445	1.14	989	1.17	105	0.91	161	15.8	30.4
1981-82 .....	1 427	1.18	1 032	1.19	127	0.76	194	16.0	30.3
1982-83 .....	1 398	0.49	1 005	0.66	124	0.52	152	15.9	29.1
1983-84 .....	1 564	1.81	1 104	1.64	153	1.17	258	15.8	27.9

(a) Wheaten only to 1906-07, thence all kinds.

(b) Bearing and non-bearing.

(c) From 1951-52, private orchards and those no longer worked have been omitted.

(d) Statistics not collected and particulars estimated.

## RURAL PRODUCTION

## Livestock and Associated Produce

Year	Livestock Numbers			Slaughterings			Wool Production	Milk Production	
	Sheep	Cattle		Pigs	Sheep and Lambs	Cattle and Calves			Pigs
		Total	Dairy Cows						
				'000			'000 kg	'000 L	
1846-47 .....	681	57							
1851-52 .....	1 250	100							
1856-57 .....	1 962	273		28					
1861-62 .....	3 038	265		69			5 791		
1866-67 .....	3 912	124		60			8 954		
1871-72 .....	4 412	143		96			11 752		
1876-77 .....	6 133	219		102			19 253		
1881-82 .....	6 804	294		120			22 118		
1886-87 .....	6 542	285		140			22 934		
1891-92 .....	7 646	399	80	82			26 133		
1896-97 .....	6 324	337	84	59			23 558		
1901-02 .....	5 012	225	75	89			20 209		
1906-07 .....	6 625	326	98	111			22 193		
1911-12 .....	6 172	394	122	93	1 276	87	27 372	127 077	
1921-22 .....	6 257	419	166	88	1 208	95	26 202	188 199	
1926-27 .....	7 284	340	127	79	1 091	143	32 824	183 817	
1931-32 .....	6 609	265	128	110	1 379	81	30 400	227 309	
1936-37 .....	7 905	328	170	85	1 697	166	34 747	289 581	
1941-42 .....	10 246	399	179	114	2 070	154	47 683	358 687	
1943-44 .....	10 360	415	188	186	2 480	189	52 374	355 504	
1944-45 .....	8 474	391	187	161	3 065	175	48 402	328 228	
1945-46 .....	6 787	374	176	120	2 017	148	33 386	360 732	
1946-47 .....	7 959	424	187	134	1 662	146	42 193	426 878	
1947-48 .....	9 055	445	197	100	1 665	148	52 821	420 513	
1948-49 .....	9 366	461	203	71	2 011	189	52 120	415 058	
1949-50 .....	9 477	464	203	70	2 317	201	54 997	406 420	
1950-51 .....	10 167	433	184	68	2 022	218	56 873	379 826	
1951-52 .....	11 470	437	176	63	1 547	216	61 454	393 237	
1952-53 .....	12 037	483	183	59	2 353	187	71 966	382 781	
1953-54 .....	11 838	491	192	61	2 637	220	66 002	386 418	
1954-55 .....	12 817	524	199	85	2 799	233	70 652	412 330	
1955-56 .....	13 585	566	195	73	2 358	227	78 788	410 739	
1956-57 .....	14 984	622	195	92	2 329	252	85 642	408 694	
1957-58 .....	15 237	597	191	108	3 278	283	84 297	366 415	
1958-59 .....	15 634	576	188	98	3 145	287	84 750	373 234	
1959-60 .....	14 025	500	170	109	3 899	238	89 942	357 323	
1960-61 .....	14 952	561	170	144	2 784	174	80 473	395 510	
1961-62 .....	16 415	659	183	170	3 140	201	93 886	434 152	
1962-63 .....	15 737	679	190	145	3 467	254	94 050	433 697	
1963-64 .....	16 402	694	185	153	2 996	279	95 481	433 244	
1964-65 .....	17 289	697	182	196	3 100	275	97 856	465 065	
1965-66 .....	17 993	690	176	224	3 474	277	104 160	447 325	
1966-67 .....	17 864	687	170	222	3 358	265	107 725	448 699	
1967-68 .....	16 405	695	157	242	4 019	245	101 000	403 693	
1968-69 .....	18 392	865	163	288	2 977	220	105 714	467 377	
1969-70 .....	19 747	1 026	149	351	4 232	249	124 529	482 959	
1970-71 .....	19 166	1 196	145	389	5 101	264	117 258	469 773	
1971-72 .....	17 970	1 495	151	479	5 144	290	117 922	457 732	
1972-73 .....	15 651	1 583	148	499	4 549	393	106 006	424 265	
1973-74 .....	16 431	1 692	138	385	2 595	359	100 131	434 107	
1974-75 .....	17 621	1 869	142	349	2 984	465	107 452	426 371	
1975-76 .....	17 279	1 891	142	326	3 561	549	101 912	397 500	
1976-77 .....	15 132	1 608	126	317	3 426	656	98 442	354 912	
1977-78 .....	14 073	1 242	117	311	3 240	744	87 092	316 681	
1978-79 .....	14 940	1 086	110	330	2 523	659	87 355	321 199	
1979-80 .....	16 046	1 067	107	398	3 451	502	95 459	331 345	
1980-81 .....	17 056	1 091	104	394	3 549	539	105 052	319 438	
1981-82 .....	16 709	1 013	102	374	3 339	580	103 617	305 648	
1982-83 .....	15 448	828	101	405	4 072	629	103 007	340 292	
1983-84 .....	16 367	812	104	416	2 857	441	108 766	381 484	

## MINING AND MANUFACTURING PRODUCTION

Year	Mining (a)			Manufacturing (b)	
	Principal Minerals Produced			Value of Production (c)	Number of Establishments
	Copper Ore and Concentrate	Coal	Iron Ore (d)		
	Tonnes	'000 tonnes	'000 tonnes	\$'000	\$'000
1846 .....	6 565			285	
1856 .....	11 980			825	
1861 .....	11 440			920	
1866 .....	23 661			1 657	
1871 .....	26 948			1 347	
1876 .....	28 597			1 205	
1881 .....	25 871			842	
1886 .....	18 713			554	
1891 .....	16 894		7	551	
1896 .....	5 030		—	496	
1901 .....	8 743		—	1 079	
1906 .....	8 340		76	1 652	
1911 .....	6 017		43	900	1 314
1916 .....	7 396		191	2 504	1 266
1921 .....	1 557		515	2 086	1 438
1926 .....	235		593	2 924	1 791
1931 .....	22		293	1 297	1 644
1936 .....	458		1 918	5 241	1 895
1941 .....	615		2 276	7 074	2 230
1946 .....	—	138	1 847	6 101	2 395
1951 .....	2	395	2 439	9 875	3 141
1955 .....	—	463	3 093	(e) 41 419	3 750
1958 .....	53	767	3 406	47 076	4 168
1959 .....	67	701	3 478	49 332	4 235
1960 .....	30	899	3 492	50 870	4 684
1961 .....	8	1 133	4 055	58 242	5 042
1962 .....	4	1 414	3 567	53 958	5 519
1963 .....	16	1 536	4 310	62 431	5 766
1964 .....	55	1 764	4 437	67 597	5 826
1965 .....	116	2 048	4 463	67 863	5 887
1966 .....	143	2 053	4 876	72 342	6 065
1967 .....	1 470	2 077	4 645	69 345	6 222
1968 .....	518	2 112	5 566	77 398	6 255
1969 .....	3 666	2 246	7 042	98 526	(f) 2 994
1970 .....	(g) 2 499	2 155	7 425	104 195	2 977
1971 .....	2 287	1 626	7 400	112 276	n.a.
1972 .....	2 819	1 536	6 301	111 623	2 979
1973 .....	9 662	1 571	6 874	134 274	2 914
1974 .....	8 830	1 494	6 065	131 446	2 984
1975 .....	10 037	1 798	5 448	125 978	(h) 2 131
1976 .....	18 433	1 819	4 479	131 903	2 287
1977 .....	16 390	1 920	3 450	153 135	2 242
1978 .....	11 975	1 757	2 189	144 573	2 170
1979 .....	14 784	1 514	2 705	174 192	2 119
1980 .....	14 183	1 723	2 701	223 977	2 143
1981 .....	12 955	1 737	2 370	226 100	2 131
1982 .....	16 310	1 425	2 241	259 372	2 219
1983 .....	16 287	1 435	1 337	404 899	2 099
1984 .....	15 578	1 269	1 469	641 930	n.y.a.

(a) Year ended 30 June from 1970. (b) Year ended 30 June. (c) Value at site of production. Quarries included from 1916. (d) Includes jaspilite. (e) Comparability affected by revaluation of iron ore. (f) For a description of the changes in definitions see page 418. (g) Metallic content from 1969-70. (h) From 1974-75 excludes single establishment enterprises employing fewer than four persons.

## GROSS VALUE OF RURAL PRODUCTION

Year	Agricultural				Pastoral		Dairying	Total Rural Production
	Wheat	Barley	Vine and Orchard Fruit	Total Crops	Wool (a)	Total		
\$'000								
1916-17 .....	21 729	599	1 653	27 677	4 274	11 200	2 759	42 909
1926-27 .....	19 052	1 685	4 082	30 181	8 937	12 140	3 895	48 357
1930-31 .....	8 091	893	3 241	15 708	3 608	5 801	3 121	26 335
1931-32 .....	17 163	1 363	3 442	25 291	3 843	5 452	3 140	35 444
1932-33 .....	13 097	1 371	3 463	20 921	4 619	5 834	3 654	32 030
1933-34 .....	10 933	1 280	3 618	19 533	9 013	10 608	3 108	34 776
1934-35 .....	10 318	1 553	3 882	19 965	5 309	7 706	3 091	32 489
1935-36 .....	13 135	1 457	3 953	22 863	8 116	10 885	3 797	39 126
1936-37 .....	14 955	1 766	4 191	26 044	8 720	12 315	4 310	44 366
1937-38 .....	15 665	3 040	4 964	29 453	8 141	11 443	5 291	48 241
1938-39 .....	8 580	2 046	4 056	20 008	7 802	12 327	5 171	39 613
1939-40 .....	16 692	3 524	4 637	30 132	10 470	14 792	5 585	52 487
1940-41 .....	8 379	2 321	4 873	20 167	10 532	14 757	6 079	43 134
1945-46 .....	17 490	4 956	7 729	40 434	8 275	14 535	9 959	69 399
1948-49 .....	32 450	10 242	10 087	64 138	40 268	47 636	13 440	131 527
1949-50 .....	40 834	14 524	10 616	81 707	56 268	63 058	16 148	167 594
1950-51 .....	45 587	19 803	13 720	97 871	132 494	139 895	15 500	259 627
1951-52 .....	45 288	27 706	20 382	120 507	72 394	86 034	21 145	234 587
1952-53 .....	57 302	42 128	19 161	139 160	97 158	109 154	23 527	279 982
1953-54 .....	43 939	28 804	20 788	115 744	88 866	105 950	24 238	254 537
1954-55 .....	41 591	23 243	17 426	104 914	83 204	101 059	25 037	239 022
1955-56 .....	38 514	25 227	20 335	110 570	79 822	100 882	30 826	250 685
1956-57 .....	44 846	34 022	23 265	129 994	114 578	138 118	29 003	305 365
1957-58 .....	20 970	19 573	24 435	90 089	84 708	111 027	26 384	235 337
1958-59 .....	43 791	39 889	23 984	140 858	67 595	99 135	32 103	280 007
1959-60 .....	16 495	10 999	21 394	71 092	85 382	123 351	29 454	231 751
1960-61 .....	68 001	37 977	24 525	161 437	70 484	94 451	30 306	294 087
1961-62 .....	51 515	22 952	27 051	124 022	85 801	111 850	29 848	273 451
1962-63 .....	56 285	19 152	25 857	128 417	92 514	127 386	31 968	295 043
1963-64 .....	77 660	26 399	29 567	165 634	113 409	150 466	34 267	358 802
1964-65 .....	74 550	30 135	36 200	178 132	94 328	135 916	37 533	360 507
1965-66 .....	59 559	20 234	31 411	144 017	103 635	152 224	39 293	345 015
1966-67 .....	79 612	26 912	36 779	184 090	104 588	169 226	40 303	404 864
1967-68 .....	42 183	12 818	32 423	127 288	79 925	129 504	37 163	306 222
1968-69 .....	112 551	25 657	37 815	221 097	95 054	136 070	39 016	408 842
1969-70 .....	82 332	23 724	43 330	184 284	91 224	148 939	40 834	386 041
1970-71 .....	40 562	34 902	45 991	164 895	65 525	123 858	43 918	347 038
1971-72 .....	76 381	40 295	49 753	213 206	85 701	153 068	47 262	430 704
1972-73 .....	44 588	27 506	54 415	177 768	164 577	261 753	47 808	503 315
1973-74 (b) .....	196 444	68 276	52 347	392 747	173 180	n.a.	27 541	772 523
1974-75 .....	163 922	119 305	77 719	432 455	122 442	n.a.	31 498	705 446
1975-76 .....	118 063	105 865	77 401	373 062	131 865	n.a.	30 170	676 873
1976-77 .....	73 726	93 807	90 318	330 398	153 550	n.a.	30 436	709 603
1977-78 .....	50 349	50 553	99 747	287 931	145 277	n.a.	34 293	696 739
1978-79 .....	265 159	118 303	110 481	607 348	161 985	n.a.	37 407	1 080 204
1979-80 .....	357 058	192 758	120 174	785 848	215 423	n.a.	42 341	1 341 567
1980-81 .....	253 598	165 418	129 307	692 726	246 646	n.a.	48 953	1 321 495
1981-82 .....	269 453	168 727	149 173	759 240	260 548	n.a.	51 912	1 428 587
1982-83 .....	120 849	98 132	132 924	505 432	258 848	n.a.	67 412	1 194 336
1983-84p .....	466 138	273 466	155 897	1 120 376	289 266	n.a.	73 991	1 785 858

(a) Shares of profits from sale of wool under war-time disposal schemes excluded.

(b) Dairying prior to 1973-74 included the value of dairy cattle and pigs slaughtered. From 1973-74 dairying consists only of milk intake by factories for market milk sales and manufacture.

## TRADE

## Overseas Exports

Year	Value of Exports				Proportion of Total Exports: Selected Countries of Destination				
	Total	Wheat and Flour	Barley	Wool	Japan	New Zealand	UK	USA	Other Countries
				\$'000			Per cent		
1861 .....	1 837	76		1 302		3.42	89.46		7.12
1871 .....	3 630	578		1 948		4.00	89.62	n.a.	6.38
1876 .....	5 928	2 146		2 884		1.96	89.58	0.07	8.39
1881 .....	6 311	1 846		3 496		0.71	82.03	—	17.26
1886 .....	5 877	420		3 508		0.69	86.90	0.04	12.37
1891 .....	11 197	2 728		3 776	0.01	0.29	80.82	0.90	17.98
1896 .....	8 111	222		3 038	1.38	0.48	56.39	0.28	41.47
1901 .....	8 866	2 232		2 208	0.07	0.65	51.62	0.10	47.56
1906 .....	13 742	4 780		3 360	—	0.26	51.68	0.24	47.82
1911 .....	20 350	7 671	2	4 007	0.04	0.17	45.96	0.13	53.70
1920-21 .....	35 339	28 675	1 175	6 035	—	1.11	59.40	1.16	38.33
1930-31 .....	20 123	6 078	685	3 006	2.38	0.81	54.11	0.79	41.91
1940-41 .....	26 393	8 617	226	6 656	5.29	3.46	50.46	15.48	25.31
1941-42 .....	29 624	3 863	338	11 596	1.01	3.39	32.02	34.14	29.44
1943-44 .....	31 170	10 504	410	8 509	—	9.18	40.36	8.61	41.85
1944-45 .....	38 334	13 175	115	8 376	—	6.30	42.34	13.18	38.18
1945-46 .....	40 307	7 407	718	14 917	—	4.95	25.45	26.43	43.17
1946-47 .....	65 023	12 304	2 998	16 095	0.01	5.37	39.47	8.86	46.29
1947-48 .....	105 805	24 507	16 030	25 608	—	4.44	39.01	8.51	48.04
1948-49 .....	138 866	38 990	11 952	40 619	0.07	2.31	44.37	8.04	45.21
1949-50 .....	127 864	23 227	10 564	49 621	2.95	6.38	42.42	7.63	40.62
1950-51 .....	215 348	36 852	14 662	109 900	5.90	2.39	39.58	14.41	37.72
1951-52 .....	194 501	42 155	18 035	65 806	4.60	7.26	39.36	14.65	34.13
1952-53 .....	245 897	36 062	30 975	87 135	8.17	3.32	45.12	12.93	30.46
1953-54 .....	220 498	30 518	24 465	78 817	6.35	5.80	41.66	10.57	35.62
1954-55 .....	190 158	24 075	15 794	69 195	5.05	6.59	40.78	11.57	36.01
1955-56 .....	195 332	26 266	14 069	70 063	6.71	7.47	38.70	10.71	36.41
1956-57 .....	245 848	32 558	18 535	98 924	13.62	7.40	31.73	13.09	34.16
1957-58 .....	199 764	24 868	17 183	73 082	11.23	7.85	31.50	9.32	40.10
1958-59 .....	181 831	23 656	20 404	63 208	13.25	7.86	34.81	8.50	35.58
1959-60 .....	181 652	19 028	12 251	74 830	12.91	4.30	32.08	7.91	42.80
1960-61 .....	198 557	36 598	19 219	64 328	18.11	5.60	27.55	4.71	44.03
1961-62 .....	243 975	47 819	23 422	83 107	14.80	4.14	25.83	8.56	46.67
1962-63 .....	212 945	32 603	6 968	83 400	16.45	4.57	25.87	8.69	44.42
1963-64 .....	322 159	76 337	13 828	107 398	17.59	4.83	26.63	5.99	44.96
1964-65 .....	302 242	53 256	15 247	92 535	17.22	5.06	25.82	7.49	44.41
1965-66 .....	296 276	45 864	7 050	94 486	18.38	5.89	22.81	10.37	42.55
1966-67 .....	325 170	55 675	13 056	98 013	20.43	4.69	15.46	8.85	50.57
1967-68 .....	282 767	31 432	2 321	77 008	21.81	5.05	18.20	11.03	43.91
1968-69 .....	300 934	27 421	11 683	84 747	25.52	4.55	16.46	9.78	43.69
1969-70 .....	417 030	59 457	16 133	81 797	19.02	5.58	17.03	9.41	48.96
1970-71 .....	393 737	83 629	23 670	62 828	18.07	5.66	13.70	6.39	56.18
1971-72 .....	394 064	64 599	35 652	68 189	18.64	7.21	13.83	5.84	54.48
1972-73 .....	521 720	48 684	17 250	149 956	23.89	6.41	8.84	7.47	53.39
1973-74 .....	662 881	103 168	40 790	153 202	19.47	9.18	7.44	4.23	59.68
1974-75 .....	764 410	174 405	99 517	93 273	16.35	6.73	5.71	2.61	68.60
1975-76 .....	685 029	109 526	90 290	115 560	19.69	5.41	5.65	3.55	65.70
1976-77 .....	789 872	84 884	88 072	172 538	21.31	5.33	5.99	4.17	63.20
1977-78 .....	661 887	51 915	39 512	114 517	16.21	6.50	4.10	6.25	66.94
1978-79 (a) .....	922 754	101 750	71 470	147 010	15.18	5.74	3.45	9.16	66.47
1979-80 .....	1 599 199	376 726	191 806	183 745	11.00	4.42	2.01	6.45	76.12
1980-81 .....	1 400 028	307 803	153 118	225 336	12.25	5.53	2.27	5.40	74.55
1981-82 .....	1 275 938	212 636	105 280	213 237	11.00	5.87	2.11	7.26	73.76
1982-83 .....	1 227 125	99 364	64 486	176 830	11.92	6.15	7.62	7.91	66.40
1983-84 .....	1 635 825	272 454	229 422	202 318	11.07	5.94	6.61	7.52	68.86

(a) From 1978-79 export statistics are by 'State of Origin'. Details for previous years are by 'State of Lodgment of Documents'.

## TRADE

## Overseas Imports; Retail Sales

Year	Value of Imports		Proportion of Total Imports: Selected Countries of Origin				Value of Retail Sales of Goods	
	Total	Metals, Metal Manu- factures, and Machinery (a)	Japan	UK	USA	Other	Total Excluding Motor Vehicles Etc.	Motor Vehicles Etc.
	\$'000		Per cent				\$ million	
1861 .....	2 756	310		80.14	0.32	19.54		
1871 .....	2 891	342		81.85	1.45	16.70		
1876 .....	6 428	1 084		81.30	1.44	17.26		
1881 .....	7 133	1 022		79.06	3.80	17.14		
1886 .....	5 003	770	0.01	78.90	6.82	14.27		
1891 .....	8 063	1 644	0.02	71.36	7.91	20.71		
1896 .....	6 475	1 198	0.18	68.59	7.82	23.41		
1901 .....	7 854	1 432	0.38	56.91	14.17	28.54		
1906 .....	7 965	2 104	0.64	63.10	10.17	26.09		
1911 .....	12 492	4 132	1.31	58.60	12.81	27.28		
1915-16 .....	10 304	2 816	3.12	47.68	19.81	29.39		
1920-21 .....	24 764	6 358	1.55	42.07	21.25	35.13		
1925-26 .....	28 160	10 602	1.13	43.30	27.84	27.73		
1930-31 .....	7 833	1 802	1.14	36.96	16.66	45.24		
1935-36 .....	10 839	3 616	2.24	38.65	21.16	37.95		
1940-41 .....	10 924	3 158	1.56	38.09	12.01	48.34		
1945-46 .....	17 556	3 622	—	62.28	10.13	27.59		
1950-51 .....	112 002	50 446	1.98	48.31	8.42	41.29		
1954-55 .....	129 607	63 144	1.28	49.18	13.28	36.26	324.4	113.4
1955-56 .....	125 504	64 656	3.18	49.17	11.70	35.95	347.8	123.6
1956-57 .....	90 813	40 536	1.39	44.01	12.26	42.34	362.3	124.7
1957-58 .....	94 205	40 792	1.85	46.37	11.91	39.87	367.2	125.4
1958-59 .....	90 693	40 534	2.56	42.08	11.50	43.86	387.2	138.0
1959-60 .....	119 493	57 962	2.69	43.89	12.15	41.27	436.6	160.2
1960-61 .....	142 764	72 570	5.37	32.66	17.61	44.36	448.9	156.1
1961-62 .....	103 386	46 774	3.28	31.95	21.87	42.90	451.6	143.1
1962-63 .....	139 826	71 820	4.08	31.83	22.92	41.17	479.9	180.5
1963-64 .....	179 651	94 302	4.72	24.75	30.63	39.90	525.3	212.5
1964-65 .....	204 856	108 243	8.01	23.72	29.11	39.16	574.5	238.0
1965-66 .....	198 156	103 032	6.84	23.32	27.25	42.59	602.0	220.4
1966-67 .....	196 771	97 861	7.69	21.64	27.72	42.95	627.1	214.7
1967-68 .....	215 619	113 215	7.16	17.29	32.71	42.84	663.6	242.0
1968-69 .....	231 956	134 222	11.19	19.82	27.35	41.64	706.9	261.1
1969-70 .....	201 223	98 204	10.77	21.49	21.50	46.23	762.3	285.7
1970-71 .....	198 358	98 358	14.44	25.10	17.32	43.14	818.8	297.6
1971-72 .....	189 748	83 083	15.08	22.83	14.48	47.61	890.9	322.5
1972-73 .....	199 978	88 271	20.48	17.49	15.08	46.95	1 037.1	n.a.
1973-74 .....	313 915	142 187	22.57	12.03	16.91	48.49	1 237.3	457.9
1974-75 .....	482 077	216 355	19.17	14.20	13.10	53.53	1 503.3	n.a.
1975-76 .....	501 476	203 407	18.57	11.14	14.84	55.45	1 781.1	n.a.
1976-77 .....	629 309	259 695	22.23	8.52	13.38	55.87	2 025.4	n.a.
1977-78 .....	628 568	248 236	21.79	8.85	12.47	56.89	2 162.7	n.a.
1978-79 .....	865 554	437 704	18.97	6.74	26.75	47.54	2 344.7	n.a.
1979-80 .....	882 457	300 393	17.25	7.18	13.09	62.48	2 528.3	n.a.
1980-81 .....	1 072 425	363 735	20.00	5.07	12.55	62.38	2 852.1	n.a.
1981-82 .....	1 337 301	465 522	21.24	3.69	13.38	61.69	3 181.7	n.a.
1982-83 .....	1 244 243	515 124	23.36	4.26	15.92	56.46	n.a.	n.a.
1983-84 .....	1 318 693	504 009	24.32	3.93	16.33	55.42	n.a.	n.a.

(a) Includes motor vehicles and other transport equipment.

## TRANSPORT AND COMMUNICATION

Year	Motor Vehicles on Register			Drivers and Riders Licences in Force	Tele- phone Services in Opera- tion (a)
	Cars and Station Wagons	Utilities, Vans, Trucks, Buses	Total (incl. Cycles, Scooters)		
		'000			
1901 .....					1 831
1906 .....					2 510
1911 .....					6 086
1916 .....					10 184
1921 .....	13.2		21.4		15 984
1931 .....	(b) 45.1	(b) 12.1	(b) 67.3	106 053	39 552
1936 .....	53.7	19.4	84.3	92 227	39 911
1941 .....	54.5	24.4	86.2	122 280	47 962
1946 .....	64.4	31.4	107.2	137 979	53 126
1948 .....	75.7	36.4	127.5	159 814	60 249
1949 .....	84.3	40.7	143.5	172 063	64 008
1950 .....	97.5	46.0	163.9	192 469	69 907
1951 .....	108.9	51.2	183.6	215 157	74 457
1952 .....	120.5	55.9	200.4	232 119	80 919
1953 .....	129.7	61.2	214.3	252 216	86 977
1954 .....	139.7	64.6	226.9	265 727	93 104
1955 .....	150.5	70.2	244.4	281 091	100 171
1956 .....	161.4	73.2	257.5	299 158	107 649
1957 .....	171.9	75.7	269.3	315 044	114 390
1958 .....	184.3	77.8	283.0	328 833	122 311
1959 .....	200.3	81.0	301.5	340 973	131 060
1960 .....	214.9	84.1	318.3	369 584	138 019
1961 .....	224.5	82.5	325.2	393 869	144 502
1962 .....	238.9	82.5	338.1	397 803	152 785
1963 .....	258.8	83.9	358.2	414 656	162 012
1964 .....	280.1	86.3	380.5	427 717	173 314
1965 .....	298.1	86.4	397.4	447 985	182 249
1966 .....	314.0	87.3	413.5	464 778	192 922
1967 .....	327.7	87.1	427.6	481 496	203 191
1968 .....	342.9	87.6	443.9	491 765	212 842
1969 .....	364.7	89.6	468.2	513 687	224 174
1970 .....	384.0	90.7	490.1	535 184	239 452
1971 .....	400.8	91.5	510.3	550 745	251 330
1972 .....	420.4	92.8	536.0	570 562	261 608
1973 .....	445.4	97.9	572.4	592 481	278 687
1974 .....	468.6	100.6	601.3	612 693	298 300
1975 .....	491.5	104.0	628.9	637 248	311 804
1976 .....	513.0	112.7	657.9	658 671	334 948
1977 .....	528.8	116.9	677.5	690 663	361 334
1978 .....	536.5	118.7	685.6	716 991	390 852
1979 .....	(c) 542.0	(c) 117.7	(c) 689.3	737 410	420 871
1980 .....	(d) 554.9	(d) 120.0	(d) 708.6	751 458	449 724
1981 .....	564.9	123.8	725.4	762 372	480 873
1982 .....	(c) 580.4	(c) 126.8	(c) 744.0	779 110	507 234
1983 .....	593.3	132.6	763.7	797 971	532 107
1984 .....	613.9	138.6	790.2	814 046	558 380

(a) At 30 June from 1916; at 31 December in earlier years. (b) Previously all motor vehicles had to be registered; from 1930 only those in actual use on the roads. (c) At Census 30 September 1979 and 1982. (d) At 30 June from 1980.



## PUBLIC FINANCE

Year	State Government					Local Government Revenue			
	Total Revenue	Expenditure		Public Debt		State Taxation (a)	From Rates	Government Grants	Total
		From Revenue	From Loan (Net)	Total	Per Head				
	\$'000	\$'000	\$'000	\$'000	\$	\$'000	\$'000	\$'000	\$'000
1840-41 ....	51	180							
1850-51 ....	445	367				202			
1855-56 ....	960	1 160		590	5-50	326		54	114
1860-61 ....	1 117	966		1 733	13-30	282	46	40	114
1865-66 ....	1 900	2 130		1 551	9-20	478	60	60	162
1870-71 ....	1 556	1 519		4 335	23-00	498	80	74	194
1875-76 ....	2 640	2 647		7 674	34-20	920	118	80	286
1880-81 ....	4 344	4 108		22 394	78-30	1 168	188	136	488
1885-86 ....	4 558	4 767	2 800	36 680	118-60	1 603	208	108	502
1890-91 ....	5 464	5 207	968	43 315	135-80	1 655	276	254	702
1895-96 ....	5 043	5 019	886	48 433	137-60	1 600	264	194	652
1900-01 ....	5 648	5 693	845	52 129	146-40	1 203	302	222	738
1905-06 ....	5 612	5 437	900	60 165	165-80	735	348	198	740
1910-11 ....	8 363	7 929	3 752 (b)	56 065	136-50	1 092	481	336	1 004
1915-16 ....	8 714	9 483	4 371	79 049	179-40	1 403	652	302	1 150
1920-21 ....	14 303	15 087	9 351	104 725	210-70	3 244	986	580	1 936
1925-26 ....	20 948	20 922	12 860	160 521	290-10	5 428	1 640	942	3 441
1930-31 ....	21 452	25 079	6 581	199 055	345-70	6 800	1 672	397	2 612
1935-36 ....	22 819	22 521	2 502	211 397	359-70	6 409	1 665	509	2 824
1940-41 ....	25 849	26 015	2 548	219 599	365-30	8 683	1 851	577	3 170
1945-46 ....	32 687	32 687	3 419	221 498	348-80 (c)	4 036	2 040	451	3 474
1950-51 ....	67 344	66 885	33 871	296 776	405-20	8 104	3 830	1 963	7 579
1955-56 ....	118 805	121 665	42 666	512 179	603-60	16 150	8 162	4 381	16 310
1959-60 ....	160 555	161 177	43 432	678 210	717-50	22 297	11 971	5 478	22 535
1960-61 ....	172 559	170 182	44 739	722 038	743-20	23 425	13 076 (d)	3 524	25 034
1961-62 ....	186 405	185 392	43 773	763 399	773-10	25 150	14 887	2 984	27 969
1962-63 ....	195 168	194 589	42 047	807 044	798-50	26 940	15 943	3 215	29 094
1963-64 ....	211 006	207 755	44 218	853 553	822-30	29 825	16 968	4 317	33 725
1964-65 ....	222 181	224 803	53 100	902 823	845-70	34 901	18 625	3 804	33 952
1965-66 ....	236 816	243 650	55 089	955 128	872-30	37 636	20 412	4 106	38 020
1966-67 ....	258 823	258 717	57 016	1 013 060	913-00	44 708	22 875	4 244	42 319
1967-68 ....	274 544	277 404	55 382	1 074 959	958-30	48 255	24 369	4 493	42 813
1968-69 ....	298 355	297 895	61 390	1 143 954	1 004-10	53 351	26 276	4 505	45 263
1969-70 ....	338 498	335 578	67 469	1 210 489	1 045-30	59 840	27 596	4 988	48 556
1970-71 ....	386 859	386 838	71 491	1 256 337	1 070-40	62 745	29 118	4 758	49 589
1971-72 ....	455 245	456 312	111 740	1 333 720	1 124-10	97 476	32 224	7 653	54 886
1972-73 ....	520 866	524 777	117 411	1 415 129	1 161-94	120 474	35 874	15 025	65 917
1973-74 ....	641 967	645 368	107 566	1 481 337	1 198-30	156 903	42 202	10 508	67 682
1974-75 ....	828 985	820 601	123 854	1 425 333	1 138-35	219 190	53 804	19 118	96 000
1975-76 ....	1 036 985	1 034 698	160 602	1 394 702	1 094-66	272 760	65 670	33 551	123 287
1976-77 ....	1 174 025	1 183 180	175 552	1 495 737	1 163-00	314 280	76 385	34 881	137 364
1977-78 ....	1 167 196	1 192 063	171 329	1 605 834	1 238-88	323 502	85 680	38 052	156 074
1978-79 ....	1 264 705	1 258 252	161 087	1 702 221	1 308-29	342 307	95 525	34 774	168 771
1979-80 ....	1 384 589	1 384 589	149 584	1 781 600	1 361-66	369 490	104 891	38 501	186 574
1980-81 ....	1 548 299	1 554 885	149 363	1 872 699	1 420-00	387 453	118 745	45 233	213 774
1981-82 ....	1 705 499	1 766 772	84 913	1 962 590	1 477-08	438 152	132 691	52 097	239 950
1982-83 ....	1 923 808	2 032 765	85 433	2 035 762	1 517-53	580 100	150 923	64 814	287 445
1983-84 ....	2 160 679	2 190 399	143 775	2 010 259	1 485-78	n.y.a.	167 603	82 419	331 739

(a) Before 1982-83 excluded taxation paid to Special Funds and Statutory authorities. From 1966-67 the coverage of this item does not completely coincide with SA Treasury classifications. (b) Debt of Northern Territory and Port Augusta-Oodnadatta railway transferred to Commonwealth Government. (c) Uniform taxation in force from 1941-42. (d) Excludes reimbursement for work done on behalf of Highways Department from 1961.

## PRIVATE FINANCE

Year	Banking		Savings Bank Deposits at 30 June	General Insurance Revenue (b)	Friendly Societies
	Trading Banks				
	Advances	Deposits			
			\$'000	Members	
1846 .....		183			
1856 .....		1 419	106		
1861 .....	2 864	1 480	243		
1866 .....	6 240	2 803	499		
1871 .....	5 715	3 043	982		
1876 .....	9 449	6 632	1 703		
1881 .....					
1886 .....	13 483	9 885	2 499		
1886 .....	19 226	9 924	3 306		
1891 .....	16 297	15 550	4 316		
1896 .....	9 470	15 343	5 673		
1901 .....	8 546	13 437	7 591		
1906 .....					
1911 .....	10 612	15 598	9 534		
1911 .....	16 970	22 257	14 872		
1916 .....	20 325	27 264	20 070		65 540
1921 .....	27 296	44 199	32 635	1 305	70 155
1926 .....	31 672	51 574	43 558	2 045	77 791
1931 .....					
1936 .....	44 119	44 956	42 844	1 627	(c)
1936 .....	43 760	52 399	50 617	1 859	71 658
1941 .....	39 547	64 182	55 019	2 643	76 357
1946 .....	31 560	93 397	131 729	2 705	80 419
1951 .....	62 109	206 743	195 698	9 298	71 591
1953 .....					
1953 .....	79 574	247 260	227 750	14 593	63 922
1954 .....	95 968	250 802	245 898	16 165	61 345
1955 .....	106 740	250 795	263 384	18 321	59 149
1956 .....	108 515	241 044	271 512	20 590	57 216
1957 .....					
1957 .....	105 618	266 897	284 802	23 835	55 499
1958 .....	125 971	262 700	297 716	24 656	54 181
1959 .....	124 924	272 599	314 304	26 223	53 114
1960 .....	149 172	265 498	331 996	27 975	52 239
1961 .....	147 348	269 848	333 485	32 363	51 551
1962 .....					
1962 .....	(a)164 936	(a)276 750	361 980	33 740	51 198
1963 .....	182 370	285 318	416 155	37 499	50 765
1964 .....	202 360	323 858	475 803	41 695	50 946
1965 .....	243 866	347 780	519 268	45 433	51 258
1966 .....	273 916	365 466	558 857	50 121	51 109
1967 .....					
1967 .....	298 981	368 851	605 167	56 114	51 001
1968 .....	345 315	388 772	643 690	59 981	51 070
1969 .....	362 967	408 903	691 778	65 354	50 880
1970 .....	390 932	423 410	733 100	70 640	50 796
1971 .....	411 180	436 297	787 901	76 020	50 488
1972 .....					
1972 .....	448 164	474 192	874 138	89 173	50 077
1973 .....	516 424	619 958	1 060 425	98 678	50 664
1974 .....	671 782	815 622	1 174 813	127 473	50 779
1975 .....	748 609	973 499	1 394 585	(d)187 316	49 888
1976 .....	914 300	1 214 488	1 617 336	231 649	48 057
1977 .....					
1977 .....	1 146 860	1 300 883	1 780 841	267 640	45 815
1978 .....	1 419 266	1 301 516	1 945 344	(e)266 594	43 051
1979 .....	1 727 818	1 436 959	2 138 263	263 903	41 575
1980 .....	1 938 230	1 651 965	2 276 896	282 268	n.a.
1981 .....	2 148 545	1 813 443	2 457 099	307 453	n.a.
1982 .....					
1982 .....	2 390 441	1 900 670	2 595 750	354 432	n.a.
1983 .....	2 561 840	1 932 848	2 978 561	428 695	n.a.
1984 .....	2 839 846	1 976 873	3 327 054	n.a.	n.a.

(a) Until 1961, average of balances at close of business on Wednesdays during the June quarter of the year stated. From 1962, average of weekly figures for the month of June of the year stated. (b) Year ended 30 June. (c) Membership at 30 June from 1932; previously 31 December. (d) From 1974-75 premium income only; details of interest, dividends and rent no longer available. (e) Details of brokers are excluded from 1977-78.

## APPENDIX B

# PRINCIPAL EVENTS

### CHRONOLOGICAL LIST OF IMPORTANT EVENTS IN SOUTH AUSTRALIA SINCE 1836

- 1836**—First migrants landed at Kangaroo Island on 20 July. First South Australian newspaper published in London. Colony's first school opened on Kangaroo Island. The Surveyor-General, Col. Light arrived in November and commenced survey of Adelaide. Governor Hindmarsh arrived in HMS *Buffalo* and proclaimed South Australia a Province on 28 December.
- 1837**—Col. Light completed survey of Adelaide and designed the city's present layout. First Adelaide land allotments made. First newspaper published in South Australia. South Australian Supreme Court established. First hospital opened in North Terrace, Adelaide.
- 1838**—First overland cattle and sheep drives from New South Wales. First export from South Australia, a small clip of wool, dispatched. First German settlers under the leadership of Pastor Kavel arrived in South Australia. Formation of first police force.
- 1839**—Col. Light died at Thebarton and buried in Light Square. First road in South Australia built between Adelaide and Port Adelaide. Adelaide Chamber of Commerce founded.

- 1840—Eyre started overland journey to Western Australia. The Municipality of Adelaide incorporated, the first in Australia. McLaren Wharf, Port Adelaide, opened by Governor Gawler.
- 1841—First South Australian mine (silver-lead) opened near Glen Osmond. Assisted migration suspended because of depression. Following financial crisis Governor Gawler recalled and succeeded by Governor Grey. Eyre arrived at Albany in Western Australia.
- 1842—Registration of births, deaths and marriages commenced. Portions of South Australia divided for first time into counties. Copper discovered at Kapunda. Legislative Council constituted. The South Australian Board of Colonisation Commissioners abolished by the British Government.
- 1843—Agricultural stripper invented by Ridley. A flour mill built at Hindmarsh.
- 1844—First Colonial Census held, and showed a population of 17 366.
- 1845—Copper discovered at Burra. Sturt explored the north-eastern part of the State. Gold found in South Australia, near Montacute. Assisted migration resumed.
- 1846—First pastoral leases granted.
- 1847—First winery in the Barossa Valley commenced operation. St Peters College established.
- 1848—Opening of The Savings Bank of South Australia. First ferry across the River Murray commenced operations at Wellington.
- 1849—The Central Board of Main Roads established.
- 1850—An Act granting representative government to South Australia passed by the British Parliament.
- 1851—The Central Board of Education established.
- 1852—First overland gold escort arrived in Adelaide.
- 1853—W. R. Randell's *Mary Ann* and Francis Cadell's *Lady Augusta* initiated the navigation of the River Murray.
- 1854—State's first railway (horse-drawn) built from Goolwa to Port Elliot.
- 1855—First South Australian postage stamps issued.
- 1856—First telegraph line opened from Adelaide to Port Adelaide. The new Constitution Act embodying the principle of responsible government proclaimed; it provided for Parliament to consist of two Houses; a Legislative Council and a House of Assembly. First steam railway from Adelaide to Port Adelaide constructed. Population of the State passed 100 000.
- 1857—Railway to Smithfield and Gawler opened.
- 1858—The Real Property Act, which embodied the principles of conveyancing formulated by Torrens, came into operation. First telegraph line to Melbourne opened.
- 1859—A jetty over 350 metres in length constructed at Glenelg. Copper discovered at Wallaroo.

- 1860—Water supplied to the City of Adelaide by means of a main connected with the reservoir at Thorndon Park.
- 1861—Copper discovered at Moonta. Water laid on to houses in Adelaide. John McDouall Stuart set out to cross the continent from south to north. The South Australian boundary shifted west to coincide with the boundary of Western Australia.
- 1862—Stuart reached Chambers Bay on the coast of the Northern Territory.
- 1863—Administration of the Northern Territory taken over by South Australia. Shops of Adelaide lit for the first time with gas.
- 1865—Annual leases of pastoral lands sold by auction for first time. The Bank of Adelaide founded.
- 1866—Camels introduced by Sir Thomas Elder for the purpose of exploration. The Adelaide Town Hall opened.
- 1867—Visit of H.R.H. Prince Alfred, Duke of Edinburgh, who laid the foundation stone of the General Post Office.
- 1869—Foundation stone of St Peters Cathedral laid. Prince Alfred College opened. Adelaide Chamber of Manufacturers founded.
- 1870—Construction of the transcontinental telegraph from Port Darwin commenced. John Forrest and party made first of two journeys of exploration from Perth.
- 1872—Transcontinental telegraph from Port Darwin completed and first direct telegram from London received.
- 1873—Eight-hour working day adopted. First Health Act, establishing a Central Board of Health, passed.
- 1874—The University of Adelaide founded.
- 1875—The State Education Act passed. First Forestry Board established.
- 1876—Telegraph communication with New Zealand established. The Smith brothers invented the 'stump jump' plough. South Australia became first State to give legal recognition to trade unions.
- 1877—Overland telegraph line from Port Augusta to Eucla completed and first telegram from Perth transmitted. The Adelaide Bridge completed.
- 1878—Provisions of the Education Act relating to compulsory school attendance brought into force in the Adelaide school district. First tramway (horse-drawn) in any Australian city commenced carrying passengers to Kensington and North Adelaide. The State's population passed 250 000.
- 1879—Foundation stone of the University of Adelaide laid. First bridge across River Murray in South Australia opened at Murray Bridge.
- 1881—First reclamation of swamp areas of River Murray. Art Gallery opened by H.R.H. Prince Albert Victor. Construction of the weir which created the Torrens Lake completed.
- 1882—Fire Brigades Board established.

- 1883—The Telephone Exchange commenced operations. Roseworthy Agricultural College opened to students.
- 1884—Largs Bay Fort opened. Adelaide Trades and Labor Council, the first delegates society, inaugurated.
- 1885—Broken Hill silver mines opened. Column erected on Mount Lofty summit as a prominent landmark for mariners.
- 1887—Act authorising payment to members of Parliament passed. Renmark Irrigation Colony established. First express trains ran between Adelaide and Melbourne. The Jubilee Exhibition opened. Stock Exchange of Adelaide formed by amalgamation of Adelaide Stock Exchange and Stock Exchange of South Australia.
- 1888—Totalisator legally authorised by an Act of Parliament.
- 1889—The School of Mines and Industries opened. Smelting of silver-lead ore from Broken Hill commenced at Port Pirie.
- 1890—First South Australian built locomotive completed.
- 1892—Education made free to the compulsory age.
- 1894—Act granting the franchise to women passed. Inauguration of industrial arbitration by the establishment of Boards of Conciliation.
- 1896—State Bank of South Australia opened. Women voted for the first time at the general election. Happy Valley Reservoir opened. One of Adelaide's most severe droughts commenced, and continued for several years.
- 1899—Second referendum concerning the establishment of Federation held. In South Australia, 65 990 electors voted for Federation and 17 053 against. First military contingent left South Australia for the Boer War.
- 1900—Adelaide lit for the first time with electric light. The Commonwealth of Australia Constitution Act received Royal Assent and a Proclamation was issued uniting the States as the Commonwealth of Australia as from 1 January 1901. Conservatorium of Music opened. First Workmen's Compensation Act passed.
- 1901—Early closing of shops introduced. First Commonwealth Parliament elected. The Duke and Duchess of York arrived in the *Ophir*. The Customs Act came into force. The Electric Light Works was opened. Iron Knob connected to Whyalla by railway.
- 1902—Flinders column, at Mount Lofty, dedicated to the public by the Governor, Lord Tennyson.
- 1905—First kindergarten in South Australia opened.
- 1906—Military cadet system inaugurated.
- 1907—High schools were established in a number of country centres. Municipal Tramways Trust incorporated. First Federal basic wage judgment—the 'Harvester' award—made.
- 1908—Penny savings bank accounts for children established. The Outer Harbor opened. Adelaide High School established.

- 1909—Adelaide electric tramways commenced operations. Payment of age pensions by the Commonwealth Government commenced.
- 1910—Payment of invalid pensions by the Commonwealth Government commenced. First recorded monoplane flight in Australia made by F. C. Custance at Bolivar.
- 1911—'Penny Postage' to all parts of the British Empire introduced. The Federal Defence Act came into operation. Administration of the Northern Territory transferred to the Commonwealth Government.
- 1913—Medical inspection of school children introduced. Commonwealth Bank formally opened. Metropolitan Abattoirs established.
- 1914—First South Australian military expeditionary force embarked at Outer Harbor. South Australia experienced its most severe drought.
- 1915—Prices of commodities fixed by a commission. A referendum approved the closing of liquor bars at 6 p.m. Women appointed as justices of the peace for the first time. First shipment of iron ore made from Whyalla to steelworks in Newcastle. First women police appointed. Opal discovered at Coober Pedy.
- 1916—Referendum proposing compulsory military service abroad defeated. First Public Service Commissioner appointed. First State living wage with general application declared.
- 1917—German private schools in South Australia were closed. East-West transcontinental railway completed and the first train ran to Perth. Mr R. G. Carey, in a Bleriot 60, made the State's first airmail flight from Enfield to Gawler.
- 1919—Captain Butler flew from Adelaide across Gulf St Vincent carrying air mail to Minlaton. Soldier Settlement Bill passed by the South Australian Parliament. First Lord Mayor of Adelaide elected.
- 1920—Sir Ross Smith and party arrived at Adelaide by non-stop flight from Melbourne. Peace Exhibition held at the Jubilee Exhibition buildings. H.R.H. Edward, Prince of Wales visited South Australia.
- 1921—The State's population passed 500 000.
- 1922—First lock on the River Murray completed and opened at Blanchetown.
- 1923—The Government approved an extensive re-organisation of the railway system.
- 1924—Public Debt Commissioners were appointed. Air mail between Adelaide and Sydney inaugurated. Waite Agricultural Research Institute established. First radio stations commenced broadcasting.
- 1925—Showgrounds at Wayville opened. The first Federal election at which voting was compulsory took place. Foundation stone of Adelaide Teachers Training College laid.
- 1926—The South Australian barley exhibit won all prizes at the Brewers Exhibition in London. The State Bank opened for general banking business. Construction of a narrow gauge railway from Oodnadatta to Alice Springs approved. State petrol tax declared invalid following a Commonwealth Government writ against the State.

- 1927**—Extension of the North-South railway commenced. The first train arrived at Renmark following the opening of the Paringa Bridge. The Duke and Duchess of York arrived in South Australia.
- 1929**—The first air mail left Adelaide for Perth. The first train to Alice Springs left Adelaide. Compulsory military training abolished and replaced by a voluntary system. Electric tram service to Glenelg commenced.
- 1930**—All officers of the South Australian Public Service over the age of sixty-five years were compulsorily retired. The South Australian basic wage was reduced by 18c to \$1.25 a day. Transport Control Board, State Finance Committee and Unemployed Relief Council established.
- 1931**—City Bridge opened. Financial Plan formulated at the Premiers' Conference adopted and Financial Emergency Act passed. Federal basic wage reduced by 10 per cent for twelve months but was to be adjusted in accordance with a retail price index. State basic wage reduced from \$1.25 to \$1.05 a day. Basic wage for females reduced, first from \$3.95 to \$3.50 and later to \$3.15 a week.
- 1932**—Boundaries and names of a number of local government areas changed and others abolished following the report of a commission.
- 1933**—The Farmers Assistance Board, the Betting Control Board and the Metropolitan and Export Abattoirs Board established.
- 1934**—Water restrictions in force from May until the following January.
- 1935**—The Nomenclature Act of 1935 restored the former German names to a number of towns, the names of which had been changed in 1917.
- 1936**—Centenary year of the State's foundation celebrated. Contract signed for the completion of Parliament House and the foundation stone laid by the Governor, Sir Winston Dugan.
- 1937**—South Australian Housing Trust established. New Federal basic wage of \$7.40 per week, which incorporated a 'prosperity' loading, declared. First trolley bus service inaugurated. Mount Bold Reservoir with a capacity of 30 000 megalitres filled, almost doubling Adelaide's water storage. Schools closed and other precautions taken as a result of an epidemic of poliomyelitis.
- 1938**—First South Australian Housing Trust dwelling completed.
- 1939**—State's worst heat wave and disastrous bush fires experienced during the first two months of the year. Record high temperature of 47.6°C recorded in Adelaide. New Parliament House opened by His Excellency the Governor-General, Lord Gowrie.
- 1940**—Goolwa Barrage completed at a cost of \$1 400 000. Birkenhead Bridge opened. A rapid development of secondary industry took place as munition annexes were added to existing factories and new factories were opened.
- 1941**—Scriptural instruction in State schools commenced. First naval vessel built in South Australia launched. First blast furnace to be built at Whyalla went into operation. Child endowment payments inaugurated. Payroll tax commenced.



- 1942—Daylight saving of one hour introduced for almost three months. Wages and prices pegged and profits and interest rates restricted. Racing and bookmaking prohibited. Rationing of tea and clothing commenced. Widows pension instituted. The uniform Income Tax Act came into force. First coal obtained from Leigh Creek.
- 1943—Price Stabilisation legislation came into force. Butter rationing commenced. Wage and price subsidies were introduced and the prices of tea, potatoes and other commodities were reduced in order to bring price indexes and wages to a lower level. Racing resumed but betting shops remained closed.
- 1944—Rationing of meat began. Morgan-Whyalla pipeline officially opened. The first State election with compulsory voting took place. Severe water restrictions imposed. First output of Leigh Creek coal for electricity generation.
- 1945—Unemployment and sickness benefits came into operation. Restrictions imposed on the use of gas and electricity for domestic and industrial purposes.
- 1946—Commonwealth Government munition factories leased to various private firms. Payment of government subsidies to hospitals commenced. Restrictions on the use of gas and electricity again imposed. The Electricity Trust of South Australia took over the property and functions of the Adelaide Electric Supply Co.
- 1947—Fruit fly detected in metropolitan orchards and efforts made to eliminate it by stripping gardens and orchards. Sugar rationing abolished. Conciliation commissioners appointed following an amendment to the Federal Conciliation and Arbitration Act. Severe restrictions imposed on imports from North America.
- 1948—Restrictions on the use of gas and electricity imposed on a number of occasions during the year because of the shortage of coal. Preparation of the Woomera rocket range commenced. Forty-hour working week introduced by Arbitration Court award. Serious bush fires occurred in January. Severe storms during April resulted in widespread damage including the destruction of the Glenelg jetty. The free medicine scheme came into operation. Clothing and meat rationing abolished. Full scale production of the 'Holden' car commenced.
- 1949—Petrol rationing by the Commonwealth Government declared illegal but resumed later in the year under a State Act. An extended national coal strike occurred. Water pipeline to the Woomera rocket range completed. The Commonwealth and South Australian Governments ratified an agreement for the standardisation of railway gauges.
- 1950—Petrol, butter and tea rationing discontinued. Federal free drugs scheme came into operation. Water restrictions imposed in December and remained in force until June 1951.
- 1951—Serious bush fires occurred in January. Wool prices reached a record high level. Distribution of free milk to school children introduced.
- 1952—The hospital benefits scheme came into operation. Price control on clothing removed in South Australia. Severe import restrictions gazetted. Installations for the bulk handling of grain opened at Ardrossan. Compulsory chest X-rays introduced.

- 1953—Remaining controls on building removed. Port Pirie became the first country town to be proclaimed a city. The medical benefits scheme came into operation. Automatic quarterly cost-of-living adjustments to the basic wage discontinued. Size of the State Cabinet increased from six to eight Ministers.
- 1954—A severe earthquake occurred in Adelaide on 1 March. Her Majesty Queen Elizabeth II visited South Australia. First unit of Port Augusta power station opened. Construction of dwellings in Elizabeth commenced. Water from the River Murray pumped into metropolitan reservoirs through the Mannum pipeline.
- 1955—Adelaide Airport at West Beach opened. The new satellite town at Elizabeth officially opened.
- 1956—River Murray flooded for several months and caused considerable damage in irrigation and reclaimed areas. Town Planning Committee established. Atomic device exploded at Maralinga. Salk Poliomyelitis vaccination program commenced.
- 1957—Centenary of responsible government in South Australia celebrated. Long service leave legislation passed by the South Australian Parliament.
- 1958—Visit of Queen Elizabeth, the Queen Mother, to South Australia. Introduction of parking meters to Adelaide. South Para Reservoir opened and connected to Adelaide water supply. Final run by a street tram in Adelaide, following conversion to diesel bus transport.
- 1959—South Australia ceased to be a claimant State for special grants from Grants Commission. Full-scale television transmission commenced. Sir Thomas Playford created record term as Premier in a British country (26 years 125 days). Aborigines became eligible for age, invalid and widows pensions.
- 1960—First Adelaide Festival of Arts held (March 12-26). Completion of second unit and formal opening of Thomas Playford power station at Port Augusta.
- 1961—First United Kingdom Trade Commissioner appointed to South Australia. Compulsory driving tests introduced. The trailer ship *Troubridge* made its first run from Port Adelaide to Kingscote and Port Lincoln. Sturt's Desert Pea declared State's official floral emblem.
- 1962—Myponga Reservoir completed and linked to Happy Valley Reservoir. Duplication of Morgan-Whyalla pipeline commenced.
- 1963—Population of the State passed 1 000 000 mark. Port Stanvac oil refinery 'on stream'. School leaving age increased to fifteen years. Three weeks annual leave for employees governed by State awards and determinations introduced. First direct dialling for an overseas telephone call from South Australia. Major gas flow from Gidgealpa No. 2 well. Royal visit by Her Majesty, Queen Elizabeth II.
- 1964—Work commenced on conversion of Port Pirie-Broken Hill railway to standard gauge. First gas from Port Stanvac refinery piped for use in Adelaide's gas supply. Record wind gust (148 km/h) registered at Adelaide on 12 July. New world land speed record set by Donald Campbell on Lake Eyre.

- 1965—Election of first Labor State Government since 1933. First country television station opened at Port Pirie. Steel works including a basic oxygen steel making plant opened at Whyalla. First woman judge in Australia appointed to Supreme Court of South Australia. Size of the State Cabinet increased from eight to nine Ministers.
- 1966—Women sworn in for jury service for the first time. The Flinders University of South Australia at Bedford Park officially opened by Her Majesty Queen Elizabeth, the Queen Mother. New outlet tunnel 2 700 metres long from Happy Valley Reservoir completed. ELDO rocket Europa-1 launched at Woomera.
- 1967—Totalizator Agency Board operated off-course in South Australia for the first time. First South Australian lottery drawn. Federal Basic Wage superseded by Total Wage concept. Liquor trading hours extended to 10 p.m. WRESAT-1, first Australian orbital satellite launched from Woomera. New record low annual rainfall for Adelaide (257 mm). Torrens Island power station commenced operations. First off-shore drilling rig—*Ocean Digger*—constructed and launched at Whyalla.
- 1968—State Elections held. Labor Government returned but subsequently defeated on the floor of the House at the first meeting of the new Parliament. New Liberal Premier, R. S. Hall sworn in. Four weeks leave for State Government employees introduced. Sealed highway from Broken Hill to Adelaide opened. Sir James Harrison first Australian-born Governor of South Australia sworn in.
- 1969—Work begun on second major pipeline to bring River Murray water to Adelaide. Electricity Trust signed \$120 million contract for supply of natural gas. Natural gas flowed through completed 832 kilometre pipeline from Moomba-Gidgealpa to Adelaide.
- 1970—Abortion law reformed in South Australia. First direct telecast from England to Australia *via* satellite. Hairy-nosed wombat adopted as State's faunal emblem.
- 1971—Fluoridation of Adelaide water supply commenced. Age of majority reduced from twenty-one to eighteen. Commonwealth Government transferred power to levy payroll tax to the States. Daylight saving introduced in South Australia for the first time since the 1939-45 War. Death of SA Governor Sir James Harrison in office. Sir Mark Oliphant, the first SA born Governor, sworn in. Wearing of seat belts in motor vehicles made compulsory.
- 1972—New Stirling to Verdun freeway opened. New laws regulating door-to-door selling and used car dealing introduced. University of Adelaide's educational radio station VLSUV commenced broadcasting. Weather temperature reports changed to degrees Celsius. Daylight saving re-introduced for 1972-73 and subsequent summers. South Australian Film Corporation commenced operation. South Australia's first Ombudsman appointed.
- 1973—New long service leave provision for three months leave after ten years service came into force. New \$11 million hospital opened at Modbury. Dunstan ALP Government returned at State election to become the first ALP Government to retain office after a general election in South Australia since 1910. Cross Lotto game introduced by State Lotteries Commission. Adelaide Festival Theatre opened by the Prime Minister. Legislation enacted for adult franchise and

proportional representation for the Legislative Council. Compulsory blood tests for road accident victims introduced. \$50 note issued for the first time.

- 1974—World Gliding Championships held at Waikerie. H.R.H. Prince Philip, the Duke of Edinburgh, visited South Australia. First match held at the new South Australian National Football League headquarters at West Lakes. Conversion of road signs to metric measurements undertaken. Judgment handed down making four weeks annual leave standard for workers under State awards. Legislation allowing hotel trading to 12 midnight on Fridays and Saturdays came into force.
- 1975—Transmission of television in colour commenced. International Equestrian Exposition 1975 held in Adelaide and attended by H.R.H. Princess Anne. State Election held on 12 July, after the Legislative Council failed to pass the Railways (Transfer Agreement) Bill; the Dunstan ALP Government was returned with a reduced majority and the Bill was subsequently passed. Medibank commenced operations in South Australia. Legislation for the redistribution of House of Assembly electoral boundaries passed by the Legislative Council.
- 1976—A new commercial radio station (5AA) went to air, Adelaide's first for forty-six years. A new political party, the New Liberal Movement formed. Sir Douglas Nicholls appointed as Governor of South Australia from 1 December 1976. A total eclipse of the sun occurred in parts of South Australia on 23 October. Large deposits of copper ore discovered at Roxby Downs near Andamooka. Legislation passed making rape within marriage a criminal offence. Capital punishment abolished in South Australia.
- 1977—Her Majesty, Queen Elizabeth II and the Duke of Edinburgh visited South Australia. \$5.8 million Southern Plaza at the Adelaide Festival Centre officially opened by Her Majesty, Queen Elizabeth II. South Australia's first million dollar lottery, the Celebration Lottery, drawn by the Lotteries Commission. A major deposit of sub-bituminous coal discovered near Lock. The South Australian Health Commission came into operation. Keith Seaman sworn in as the new Governor of South Australia. Adelaide's first water filtration plant at Hope Valley commenced operations. Late night shopping in city and suburbs commenced.
- 1978—A Royal Commission held into the dismissal of Police Commissioner Salisbury. The last ship to be built at Whyalla shipyards, the *Denis O'Malley*, was launched. Adelaide tramways held centenary celebrations. Lotteries Commission introduced Instant Money Game with prizes of up to \$10 000. South Australian Heritage Committee was formed.
- 1979—A new public transport zone-fare system introduced. D. A. Dunstan, the State's second longest serving Premier resigned for health reasons. Adelaide's unemployment levels highest in Australia in March—8.9 per cent of the workforce. Santos legislation passed, limiting maximum permissible single shareholdings to 15 per cent. State elections held; D. O. Tonkin, new Liberal Premier, sworn in. Merger of Bank of Adelaide with ANZ Banking Group approved. Charles Moore retail group ceased operating in South Australia.
- 1980—Norwood by-election, ordered by Court of Disputed Returns, won by ALP candidate G. Crafter. Bushfire destroyed thirty-five houses in Adelaide Hills, causing \$6 million damage. First of State Transport Authority's new series

2000 railcars began service. Mitsubishi Motor Corp. purchased control of Chrysler Australia Ltd. New slogan 'The Festival State' for South Australian motor vehicle number-plates. Constitutional Museum opened. H.R.H. Princess Alexandra and her husband, Mr Angus Ogilvy, visited South Australia. The Tarcoola-Alice Springs rail link opened.

**1981**—By-election for Federal seat of Boothby, made vacant by the appointment of Mr J. McLeay as Consul-General in Los Angeles, won by Mr R. Steele Hall (Liberal). On February 15, Adelaide had its hottest day since 1948. Temperature reached 43·4°C. H.R.H. Charles Prince of Wales visited South Australia. On June 1, Adelaide recorded its lowest barometric pressure ever (979 millibars).

**1982**—Commencement of Moomba-Stony Point liquids pipeline. An Australian register of ships established. Lt-Gen. Sir Donald Dunstan, KBE, CB, sworn in as the State's new Governor, in April. Mr Mario Feleppa, AM, endorsed to fill a casual vacancy in the Legislative Council, became the first Italian-born migrant to enter the South Australian Parliament. On June 8, Adelaide experienced its coldest minimum temperature since the Bureau of Meteorology began taking records in 1857; -0·4°C. Following amendments to the Licensing Act, some hotels 'in tourist areas' began trading on Sundays, for one or two two-hour periods. State elections held; J. C. Bannon, new Labor Premier, sworn in. International air services commenced through Adelaide.

**1983**—First twins born in South Australia under Queen Elizabeth Hospital's *in vitro* fertilisation program. Large bushfires in February claimed 28 lives in South Australia. Damage estimated at over \$200 million. Fires at nine separate locations, including Clare, Adelaide Hills, and South-East. Adelaide recorded its lowest maximum March daytime temperature 14·9°C (on March 22) for 104 years. The State was visited by H.R.H. Charles Prince of Wales, and the Princess of Wales. Mrs Wendy Chapman was elected Adelaide's first woman Lord Mayor. Liquids pipeline from Moomba to Port Bonython completed.

**1984**—Maralinga Land Rights Bill was passed by State Parliament, returning 76 000 square kilometres of South Australia's Far North to the traditional Aboriginal owners. Australian National's new Adelaide Rail Passenger Terminal at Keswick began operating. Australia's new \$100 note and \$1 coin released for the first time. State Bank and Savings Bank of South Australia amalgamated. Snow fell in the Mount Lofty Ranges, in the Mid North, and at Peterborough.

**1985**—The Adelaide Station and Environs Redevelopment (ASER) Property Trust continued construction on the site of the old railway station yards. The Trust is building a 400-room international hotel, a convention centre, a new office block and two parking stations. ASER is also a partner in the company which will operate the casino to be established in the station building. Construction commenced on the track (in Adelaide's East Parklands) to be used in November for the Australian Formula One Grand Prix motor race.

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1301.4	South Australian Year Book a .....	1984	Nov. 1984
1302.4	Pocket Year Book of South Australia a .....	1985	Mar. 1985
1303.4	Monthly Summary of Statistics m .....	July 1985	July 1985
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1306.4	South Australia at a Glance a .....	1985	Apr. 1985
1307.4	Seasonally Adjusted Indicators a .....	1982	Mar. 1983
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7322.4	Fruit a .....	1983-84	Mar. 1985
7411.4	Agricultural Land Use and Selected Inputs a .....	1983-84	May 1985
7503.4	Value of Agricultural Commodities Produced a .....	1983-84	July 1985

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8202.4	Manufacturing Establishments: Details of Operations a .....	1982-83	Nov. 1984
8203.4	Manufacturing Establishments: Small Area Statistics a .....	1982-83	Nov. 1984
8204.4	Manufacturing Establishments: Selected Items of Data Classified by Industry and Employment Size a .....	1982-83	Nov. 1984
8207.4	Domestic Appliance and Energy Usage irr .....	Apr. 1979	Sept. 1979
8208.4	Domestic Appliance and Energy Usage—A Technical Analysis irr .....	Apr. 1979	Dec. 1980
INTERNAL TRADE			
8502.4	Interstate Trade irr .....	1981-82	June 1983
8604.4	Census of Tourist Accommodation Establishments irr .....	1973-74	Feb. 1976
8622.4	Census of Retail Establishments and Selected Service Establishments: Details of Operations by Industry Class irr .....	1979-80	Jan. 1982
8623.4	Census of Retail Establishments and Selected Service Establishments: Industry and Commodity Details by Statistical Retail Area and Local Government Area irr .....	1979-80	Apr. 1982
8624.4	Census of Retail Establishments and Selected Service Establishments: Hotels and Accommodation irr .....	1979-80	May 1982
8625.4	Census of Retail Establishments and Selected Service Establishments: Commodity Sales and Service Takings irr .....	1979-80	June 1982
8626.4	Census of Retail Establishments and Selected Service Establishments: Industry and Commodity Details by Size of Establishment irr .....	1979-80	July 1982
8635.4	Tourist Accommodation q .....	Mar. Qtr. 1985	July 1985
BUILDING			
8705.4	The Housing Intentions of South Australians irr .....	Nov. 1979	June 1980
8709.4	Use of Water Appliances by Households irr .....	Nov. 1982	Aug. 1983
8731.4	Building Approvals m .....	June 1985	July 1985
8733.4	Building Approvals in Local Government Areas a .....	1983-84	Aug. 1984
8740.4	Dwelling Unit Commencements Reported by Approving Authorities, Preliminary m .....	Sept. 1984	June 1985
8741.4	Dwelling Unit Commencements Reported by Approving Authorities q .....	Sept. Qtr. 1984	July 1985
8752.4	Building Activity q .....	Mar. Qtr. 1985	July 1985
TRANSPORT			
9201.4	Travel to Work, School and Shop in the Adelaide Statistical Division irr .....	Oct. 1981	Apr. 1982
9301.4	Motor Vehicle Census irr .....	1982	June 1983
9401.4	Road Traffic Accidents q .....	Dec. Qtr 1981	Mar. 1983

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m	monthly	a	annually
q	quarterly	irr	irregularly
hy	half-yearly		